

A MODEL HOUSING LAW

REVISED EDITION



VEILLER

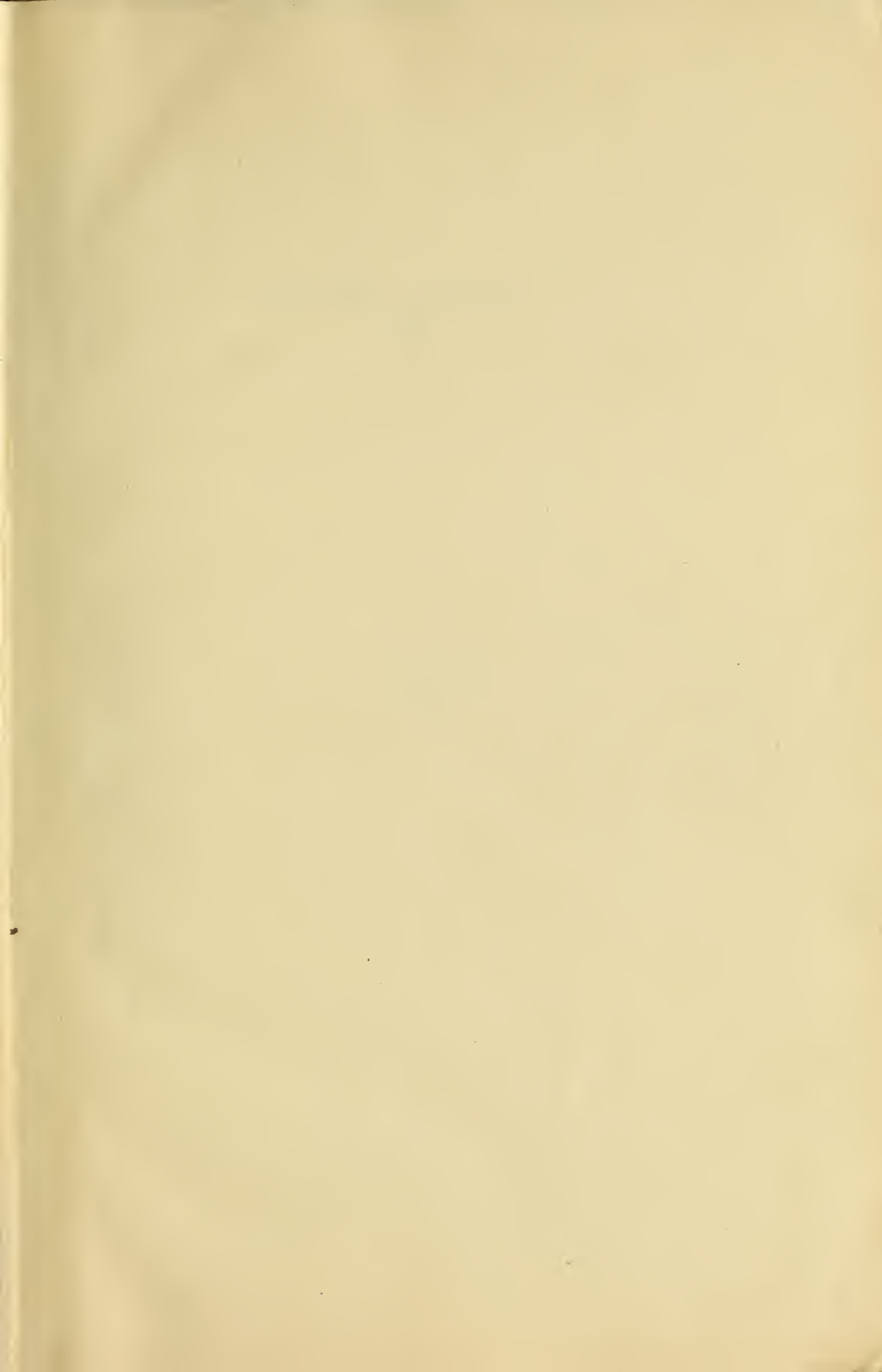


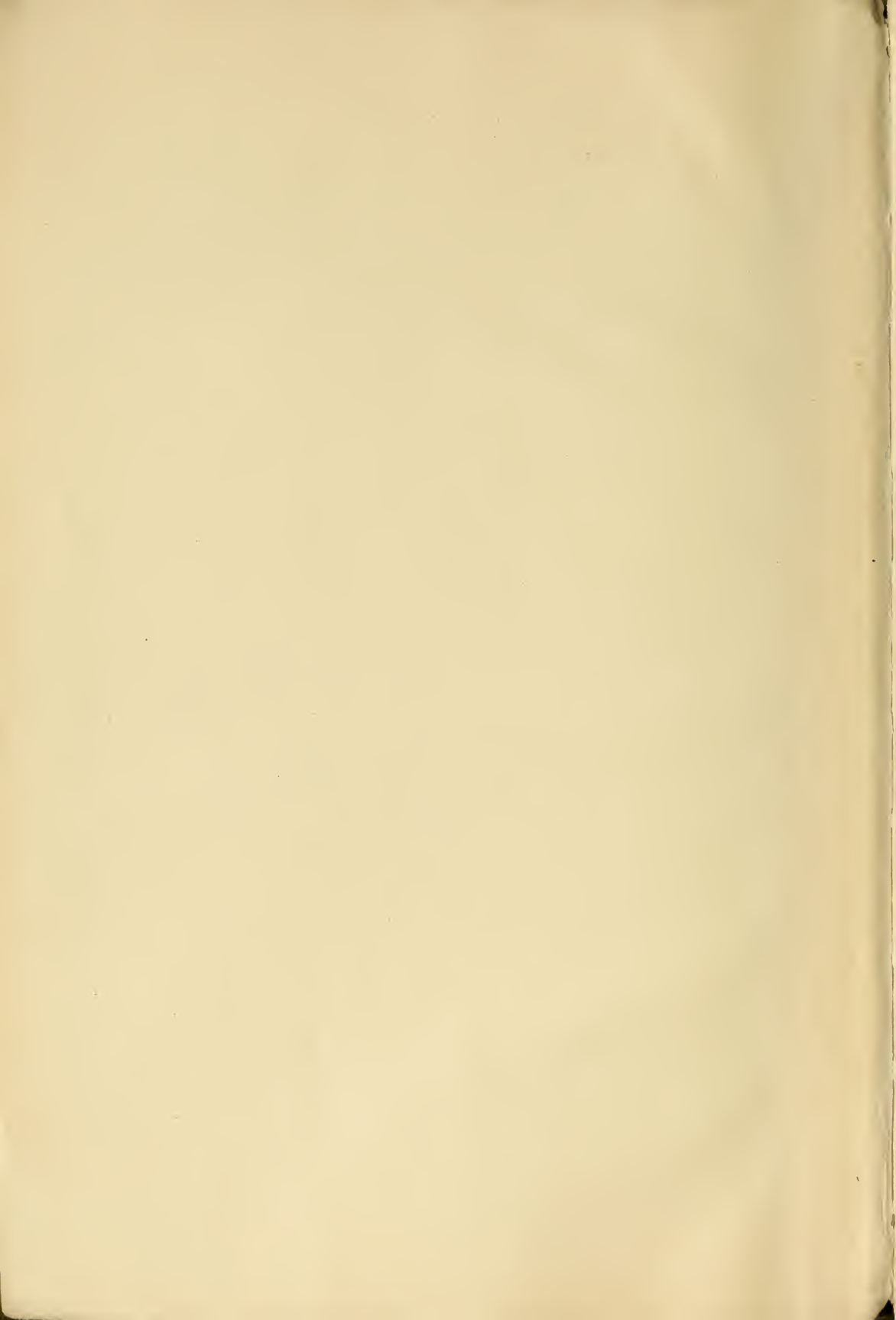
Class HJ 7293

Book F3 V45

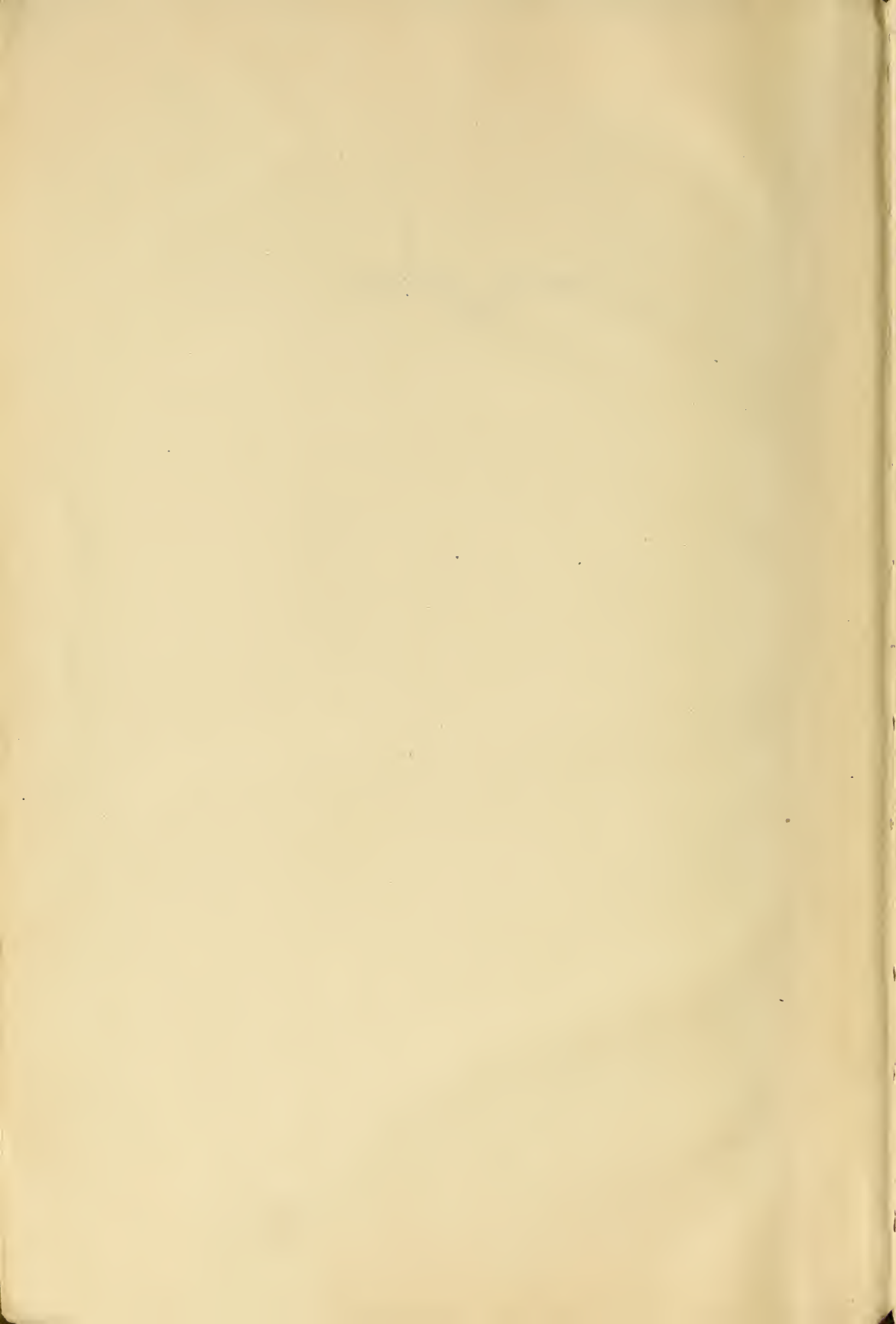
Copyright N° 1920

COPYRIGHT DEPOSIT.





A MODEL HOUSING
LAW



A MODEL HOUSING LAW

BY
LAWRENCE *Turner* VEILLER

AUTHOR OF "HOUSING REFORM," "A MODEL TENEMENT
HOUSE LAW," ETC.



REVISED EDITION

NEW YORK
RUSSELL SAGE FOUNDATION
1920

HI 7293
A3 V45
1920

Copyright, 1914, by
THE RUSSELL SAGE FOUNDATION
Revised edition copyrighted, 1920, by
THE RUSSELL SAGE FOUNDATION

APR -B 1920

WM · F. FELL CO · PRINTERS
PHILADELPHIA



©Cl. A565481

net 1.

ENS 8 Apr. 1920

PREFACE TO SECOND EDITION

SINCE the Model Housing Law was published five years ago, much has happened in America in the world of housing. A number of states and cities have passed housing legislation based upon the Model Housing Law. The experience of these states and communities in adapting the Model Housing Law to their local needs and conditions, has developed as it naturally would some weak spots and difficulties in the Model Law. For this reason it is believed that a new edition of this book is necessary, the first edition having been exhausted for over a year.

When the Model Housing Law was published in 1914 it was a pioneer effort. There were practically no housing laws of any kind in the country. There were only tenement house laws and those based on New York City's experience. New York City is absolutely *sui generis*. The conditions which prevail there do not prevail generally throughout the United States, and laws that are suited to the peculiar conditions that exist in New York City are quite unsuitable for most of our American cities. The types of dwellings which exist throughout the country are not the tall tenement houses of New York but very different types.

This new edition, therefore, represents not only the experience of all the states and cities in the country which have enacted housing laws since 1914, but also the experience as well of the author in his capacity as Secretary of the National Housing Association in aiding in the drafting of such laws, in adapting them to local conditions and in meeting the difficulties that have arisen.

The coming into almost universal use of the automobile has brought with it very difficult problems radically affecting property subdivision and building construction. It has brought many of the difficulties that have been encountered in attempting to apply the Model Housing Law in different states and cities.

PREFACE TO SECOND EDITION

The leading housing laws of the country which have been based upon the Model Housing Law are the following:

Housing Code of Michigan, Act 167, Public Acts of 1917.

This law applies to every city and organized village in the state having a population of 10,000 or more. It is a true housing law and applies to all classes of dwellings, namely, buildings in which people live. The act applies to some 29 cities throughout the state.

Minnesota Housing Act, Chapter 137 of the laws of 1917.

This is a true housing act affecting all classes of dwellings, but its application is limited to cities of the first class not organized under Section 36 of Article 4 of the State Constitution; that is, it applies only to the city of Minneapolis.

Iowa. Housing Law of Iowa, Chapter 123 of the laws of 1919. It is a true housing law, applies to all classes of dwellings and affects all cities having a population of 15,000 or more.

Also the following laws, based upon its predecessor "A Model Tenement House Law."

Two acts in California of 1917; the Indiana Laws of 1913 and 1917; the Kentucky Act of 1910; the Massachusetts Act for Towns of 1912 and for cities of 1913; the Pennsylvania Act of 1913.

At the time of the publication of this book early in 1920 housing laws based on the Model Housing Law have been proposed in the state of Illinois, the states of Pennsylvania and Rhode Island and in Massachusetts for the city of Boston. The following cities have ordinances based on the Model Housing Law: St. Paul, Minn., Grand Rapids, Mich., Duluth, Minn., Berkeley, Calif., Syracuse, N. Y., Cleveland, Columbus, Lansing, Mich., Portland, Oregon, and Salem, Mass.

The first edition of this book contained a chapter entitled "A Model Tenement House Law" in which was indicated a scheme by which if a given community felt that it could not enact a housing law applicable to all classes of dwellings, but desired to enact a tenement house law applying only to tenement houses, flats and apartments, it might quickly and easily adapt the Model Housing Law to such purpose. This chapter has been omitted from the revised edition; for, no community in the last five years has de-

PREFACE TO SECOND EDITION

sired to avail itself of this scheme. Tenement House laws are not being proposed. The Nation as a whole recognizes the propriety of housing legislation.

CHANGES FROM THE FIRST EDITION

In order that persons using the Model Housing Law, and especially those who have already secured the enactment of housing laws, may note quickly the changes that have been made in this edition from the first edition published five years ago, there is appended the following table which shows by section number the changes that have been made. This uses the first edition as the base and indicates by the corresponding section number in the new or present edition where the section number is changed. It also gives quick reference to the page number of both editions and indicates in the form of comments whether there are material changes, whether there are slight changes or whether there are no changes. Where sections are omitted this is indicated and where the sections are new this is similarly indicated.

SECTIONS CHANGED FROM FIRST EDITION

<i>First Edition</i>		<i>Present Edition</i>		<i>Changes</i>
<i>Section No.</i>	<i>Page No.</i>	<i>Section No.</i>	<i>Page No.</i>	
Title.....	27.....	Title.....	27.....	material changes
1.....	28.....	1.....	27.....	material changes
2.....	29.....	2.....	30.....	no changes
2 (1).....	30.....	2 (1).....	31.....	no changes
2 (2).....	30.....	2 (2).....	32.....	slight changes
2 (3).....	32.....	2 (3).....	34.....	no changes
2 (4).....	34.....	2 (4).....	36.....	slight changes
2 (5).....	34.....	omitted.....		omitted
2 (6).....	35.....	2 (5).....	37.....	no changes
2 (7).....	35.....	2 (6).....	37.....	slight changes
2 (8).....	39.....	2 (7).....	41.....	slight changes
2 (9).....	41.....	2 (8).....	43.....	material changes
2 (10).....	41.....	2 (9).....	43.....	no changes
2 (11).....	43.....	2 (10).....	45.....	no changes
2 (12).....	43.....	2 (11).....	45.....	no changes
new.....	new.....	2 (12).....	46.....	new
2 (13).....	43.....	2 (13).....	46.....	material changes
2 (14).....	47.....	2 (14).....	49.....	no changes
2 (15).....	47.....	2 (15).....	50.....	slight changes

PREFACE TO SECOND EDITION

SECTIONS CHANGED FROM FIRST EDITION—(Continued)

<i>First Edition</i>		<i>Present Edition</i>		<i>Changes</i>
<i>Section No.</i>	<i>Page No.</i>	<i>Section No.</i>	<i>Page No.</i>	
2 (16)	48	2 (16)	50	slight changes
2 (17)	49	2 (17)	51	material changes
2 (18)	50	2 (18)	52	material changes
2 (19)	50	2 (19)	53	no changes
2 (20)	50	2 (20)	53	material changes
new	new	2 (21)	56	new
3	53	3	57	material changes
4	54	4	60	material changes
5	55	5	61	material changes
new	new	6	62	new
6	55	7	62	material changes
new		7	62	new
new		8	65	new
7	58	9	65	material changes
8	58	10	67	no changes
9	59	omitted		omitted
10	67	11	67	slight changes
11	67	12	68	slight changes
20	71	20	71	slight changes
21	75	21	75	slight changes
22	77	22	82	material changes
		23	89	
23	86	24	94	material changes
24	89	25	113	material changes
25	93	26	119	material changes
26	96	27	121	no changes
27	98	28	124	no changes
28	99	29	125	material changes
		30	130	
29	103	31	132	material changes
30	105	32	135	slight changes
31	106	33	136	material changes
32	108	34	139	material changes
33	110	35	141	no changes
34	114	36	145	slight changes
35	115	37	147	material changes
36	119	38	152	no changes
37	122	39	156	material changes
38	124	40	157	material changes
39	124	41	158	material changes
40	127	42	161	no changes
41	127	43	161	no changes
42	128	44	162	slight changes
43	130	45	164	no changes
44	132	46	166	material changes
45	132	47	166	slight changes
46	137	48	172	material changes
47	138	49	173	slight changes

PREFACE TO SECOND EDITION

THE SECTION NUMBERS ARE IDENTICAL FROM THIS POINT ON

<i>First Edition</i>		<i>Present Edition</i>	<i>Changes</i>
<i>Section No.</i>	<i>Page No.</i>	<i>Page No.</i>	
50	142	178	slight changes
51	143	179	slight changes
52	148	184	slight changes
53	152	187	slight changes
54	153	189	no changes
55	153	189	slight changes
56	155	190	material changes
57	157	193	slight changes
58	158	193	slight changes
59	159	194	slight changes
60	160	196	no changes
61	160	196	no changes
62	160	196	no changes
70	161	200	no changes
71	162	200	slight changes
72	162	200	no changes
73	163	201	material changes
74	165	202	slight changes
75	165	202	no changes
76	166	204	slight changes
77	167	204	no changes
78	167	205	no changes
79	168	206	slight changes
80	169	206	no changes
81	169	206	no changes
82	169	207	slight changes
83	169	207	no changes
84	169	207	slight changes
85	170	207	material changes
86	171	208	no changes
90	172	210	slight changes
91	172	210	no changes
92	173	211	no changes
93	174	212	no changes
94	175	213	no changes
95	177	215	no changes
96	177	215	no changes
97	178	216	slight changes
98	179	217	slight changes
99	181	219	slight changes
100	181	219	slight changes
101	182	220	slight changes
102	183	221	slight changes
103	183	222	no changes
104	184	222	no changes
105	185	223	material changes
106	186	225	slight changes

PREFACE TO SECOND EDITION

<i>First Edition</i>		<i>Present Edition</i>	<i>Changes</i>
<i>Section No.</i>	<i>Page No.</i>	<i>Page No.</i>	
107	188	226	slight changes
108	189	227	slight changes
109	189	228	material changes
110	190	229	no changes
111	192	230	material changes
112	194	234	no changes
113	196	236	no changes
114	198	239	no changes
115	198	239	slight changes
120	200	240	no changes
121	204	244	material changes
122	205	245	material changes
123	206	246	no changes
124	206	246	material changes
125	216	257	no changes
126	217	258	no changes
127	217	258	slight changes
128	219	260	slight changes
129	220	260	slight changes
140	221	263	material changes
141	225	266	material changes
142	226	268	no changes
143	227	269	slight changes
144	229	271	slight changes
145	232	274	material changes
146	232	275	no changes
147	233	275	no changes
148	234	276	material changes
149	235	277	no changes
150	235	278	material changes
151	236	278	no changes
152	237	279	material changes
153	237	279	material changes
154	239	282	slight changes
155	240	282	no changes
156	240	283	slight changes
157	242	284	slight changes
158	242	285	material changes
new	new § 159	286	new
159	244 § 160	287	no changes

TABLE OF CONTENTS

	PAGE
PREFACE TO SECOND EDITION	V
I. HOUSING REFORM THROUGH LEGISLATION	I
II. BUILDING CODES, TENEMENT HOUSE LAWS AND HOUS- ING LAWS	9
III. HOW TO USE THE MODEL LAW	17
IV. A MODEL HOUSING LAW	25
ARTICLE I	
General Provisions	27
ARTICLE II	
Dwellings Hereafter Erected	69
Title 1. Light and Ventilation	71
Title 2. Sanitation.	161
Title 3. Fire Protection	176
ARTICLE III	
Alterations	199
ARTICLE IV	
Maintenance	210
ARTICLE V	
Improvements	240
ARTICLE VI	
Requirements and Remedies	262
V. WHAT KINDS OF HOUSES CAN BE BUILT UNDER THE MODEL LAW?	291
VI. AN IDEAL HOUSING LAW	335
VII. THE STANDARDS OF THE FEDERAL GOVERNMENT	341
VIII. ZONING	373
INDEX	383

DIAGRAMS

FIGURE	SECTION	PAGE
1. Rear yards—Methods of measurement	2 (6)	38
2. Rear yards of irregular depth	2 (6)	39
3. Rear yards—Methods of measurement—Extensions	2 (6)	40
4. Rear yards—Methods of measurement—Courts	2 (6)	40
5. Inner courts	2 (7)	42
6. Outer courts between wings	2 (7)	42
7. Outer courts on the lot line	2 (7)	42
8. Rear of the lot in triangular lots	2 (9)	44
9. Rear of the lot with entrance at side	2 (10)	45
10. Basements and cellars—Varying grades—Low at rear	2 (13)	48
11. Basements and cellars—High at rear	2 (13)	48
12. What is a corner lot?	20	74
13. Neighborhood treatment of yards	22	84
14. Yards of corner lots	22	88
15. Offsets to courts	25	115
16. A court carried down unlawfully	27	121
17. A lawful court	27	121
18. Intakes for inner court's	27	118
19. Cutting off the corners of a court—Lawful	28	124
20. Cutting off the corners of a court—Unlawful	28	124
21. Space required between buildings	29	128
22. Space between buildings—Side by side	29	129
23. Room with windows in corner—Unlawful and Lawful	31	134
24. Room with furniture in it	33	137
25. Narrow servant's room	33	138
26. "Wardrobe flats"—The flat as approved—Two rooms	35	144
27. "Wardrobe flats"—The flat as occupied—Four rooms	35	144
28. Privacy—Access to water-closets and bed rooms	36	146
29. General toilet room	37	151
30. Hall lighting—Window at end—Lawful	38	154
31. Hall lighting—The usual hotel corridor—Unlawful	38	154
32. Damp proofing of walls and floors	44	163
33. Pan and long hopper closets	49	174

DIAGRAMS

FIGURE	SECTION	PAGE
34. Fire tower	51	183
35. New court in an old building	73	201
36. Spoiling the light of an existing room	75	203
37. Spoiling the light of an existing hallway	75	204
38. Sash windows provided between rooms	120	242
39-45. Water-closets in place of privies	124	249-255
46. A school-sink	124	257
Houses that Can Be Built Under the Model Law		
47-60. Detached houses on 40-foot lots		307-320
61-74. Detached houses on 25-foot lots		321-334
68-74. Continuous rows or terraces on 25-foot lots		328-334
47-53. Two-story and attic detached houses		307-313
54-67. Three-story and attic detached houses		314-327
68-74. Three-story and attic houses in continuous rows		328-334
75. Ideal houses—Two rooms deep, with a central park		337
76. Residence districts—One side of block business		378

I

HOUSING REFORM
THROUGH LEGISLATION

HOUSING REFORM THROUGH LEGISLATION

TO the social reformer who believes that the solution of the housing problem is to be found in a change in methods of taxation or in a new industrial era this book will have but little interest.

How delightful it would be to be able to believe that all that is needed to bring about proper housing conditions is a change in the economic status of the working people! That given enough wages, slums would vanish! Flying carpets, wishing caps, and magic philters have from time immemorial had an indescribable charm for humanity. But alas, it is not to be done so easily. City slums cannot by the wave of a necromancer's wand become gardens of delight.

The determination of how best to accomplish housing reform depends a good deal upon one's conception of what the housing problem is; before there can be adequate discussion of the remedy there must be agreement as to the disease. In other words, we must know what we are going to reform before we attempt to reform it.

There is great variety of opinion on this subject, especially among those to whom it is a new subject. Some people seem to believe that the housing problem is essentially the problem of cheap houses; as they have expressed it, "of providing a home for the man who cannot afford to pay more than \$9.00 a month." But this is a singularly misleading and restricted view of a large and complicated question. It is but one aspect of it. It would be as appropriate to say that the problem of child welfare is the providing of milk at four cents a quart.

Another group, with their eyes fixed upon the more crowded quarters of some of the larger cities where the problem of moving back and forth the vast throngs who journey from one part of the city to another twice a day is fraught with great difficulties,

conceive that the housing problem is the problem of rapid transit, and that if cheap and effective rapid transit could be once provided the housing problem would be solved. This is not a new view.

Still another element believe that the housing problem is the problem of supplying a sufficient *quantity* of housing accommodations and that anything which tends to encourage the building of more houses will solve the housing problem, the assumption being that people live under bad conditions simply because there are not enough houses to go around.

There is truth in all these views. Each one is a factor involved in the housing problem, but no one of them can be truthfully said to constitute that problem.

The housing problem is the problem of enabling the great mass of the people who want to live in decent surroundings and bring up their children under proper conditions to have such opportunities. It is also to a very large extent the problem of preventing other people who either do not care for decent conditions or are unable to achieve them from maintaining conditions which are a menace to their neighbors, to the community and to civilization.

If we accept this view of what constitutes the housing problem we see that it has many sides; that it is not only an economic problem, not only a question of supply and demand and of furnishing a sufficient quantity of homes, but that the *kind* of home is of vital importance. The assumption that thousands of people live under conditions such as are found in our large cities throughout America because there are no other places in which they can live is not borne out by the facts. There is no use in dodging the question. We may as well frankly admit that there is a considerable portion of our population who will live in any kind of abode that they can get irrespective of how unhygienic it may be.

Housing reform is to be sought in many ways, but chiefly through the enforcement of wise laws; laws which will regulate the kind of houses that may be built, will compel the improvement of the older buildings as they fall into disuse, and will require all buildings in which human beings live to be kept in a sanitary and safe condition.

But legislation is not the only way. Much must be done through education,—education of both tenant and landlord, and

even of the community itself. The force of example some think will do much, but thus far that expectation has not been realized.

Considerable also can be accomplished by wise management; by the building of houses of a more attractive type; by encouraging the development of Garden Cities; by stimulating those who like country life to live in the country or in the suburbs; by improved transit, thus making it easier for men to live out of town and journey to their work; and especially by the intelligent planning of towns and cities.

But what makes any of us take up housing reform is not primarily the desire to see any of these things brought about, but the insistent demand made by our consciences for the abolition of the slum.

We all of us believe that the conditions under which thousands of our fellow citizens live are wrong and a mockery on civilization, and to many of us the continuance of such conditions seems fraught with menace to our institutions. That the people themselves often have created the very conditions from which they suffer does not alter the situation. The conditions are there and must be dealt with. The one thing that we are all agreed upon is that we cannot afford to neglect them.

The housing problem is therefore essentially the problem of preventing people from maintaining conditions which are a menace to their neighbors or to the community.

Housing evils as we know them today are to be found in dangerous and disease-breeding privy vaults, in lack of water supply, in dark rooms, in filthy and foul alleys, in damp cellars, in basement living rooms, in conditions of filth, in inadequate methods of disposal of waste, in fly-borne disease, in cramped and crowded quarters, in promiscuity, in lack of privacy, in buildings of undue height, in inadequate fire protection, in the crowding of buildings too close to each other, in the too intensive use of land.

How are these manifold evils to be remedied? Legislation thus far has proved to be the most effective remedy. The only way that we know of by which such conditions can be ended is through the enactment of laws which will compel the removal of these evils and the substitution of right conditions. This is not theory but the result of the experience of many cities.

A MODEL HOUSING LAW

Legislation alone, of course, will not do it. Laws must be enforced. Merely getting a housing law on the statute books will not change conditions. Unfortunately, laws do not execute themselves and no law will do much unless an adequate system of enforcement is also provided.

True, it is a painful operation. It takes time and energy and above all things patience. It means constant effort. It means attention to innumerable details. It often means foregoing immediate results to secure larger future returns.

Housing is a commodity like food or clothes, and the methods to be employed in securing the right kind of housing for the people of any community differ in no essential respect from the methods to be followed in providing the right kind of food or clothing for that community. In a city where the children of the poor were dying of typhoid because of impure milk, we should, I think, feel that it was trifling with a serious situation if it were urged that nothing could be done through legislation, but that the only way to insure a better milk supply was to encourage the people to move to the country where they could have their own cows and thus insure the right kind of milk for their children.

We should undoubtedly feel that it was playing with a vital situation were it proposed to meet a crisis of this kind through the establishment of a model dairy which would furnish milk to 1 per cent of the children of the city, and at the same time allow the other 99 per cent to be poisoned by bad milk. What every community has done under such circumstances has been to rise in its might and say bad milk shall not be sold. In other words, they have sought the remedy for such a condition through law and law enforcement, and they have gotten results. It is all right to establish a model dairy to encourage others and show how good milk can be produced, but this should follow an ordinance prohibiting the sale of skim milk or milk containing too large a bacterial count. No sane community would accept the establishment of one model dairy as a substitute for that kind of legislation. Good housing is to be provided in just the same way.

The question which every housing reformer must face is: What method will give the largest results with the least expenditure of energy and effort? It is largely a question of emphasis. The

HOUSING REFORM THROUGH LEGISLATION

method which will return 90 per cent of results and not 10 per cent, is obviously the method to follow. No one thing will in itself solve the housing problem in any community. Housing evils are of so manifold a nature and have so many manifestations that it is, of course, apparent that many things must be done before right conditions can be achieved. There is no method of housing reform which the housing reformer should not adopt provided it will produce results. It must always be submitted to this practical test. In some cases all methods are to be employed, not merely one.

That legislation alone will solve the housing problem is of course absurd. But the point that we wish to lay emphasis upon is that in most cases the largest results have come from legislative action and that until certain fundamental evils have been remedied it is futile, or worse, to adopt the methods of housing reform which may be said to belong to the post-graduate period rather than to the kindergarten stage of a community's development. In other words, we must get rid of our slums before we establish Garden Cities; we must stop people living in cellars before we concern ourselves with changes in methods of taxation; we must make it impossible for builders to build dark rooms in new houses before we urge the government to subsidize building; we must abolish privy vaults before we build model tenements. When these things have been done there is no question that effort can be profitably expended in the other directions mentioned.



II

BUILDING CODES, TENEMENT HOUSE LAWS
AND HOUSING LAWS



BUILDING CODES, TENEMENT HOUSE LAWS AND HOUSING LAWS

IF we accept the principle that the largest results in housing reform will come through legislation, the immediate practical questions which present themselves are: What kind of laws shall we work for, how shall we prepare them and how obtain them?

As a rule, the first suggestion which comes to mind is to amend the building code. Every city of considerable size has a building ordinance of some kind and in those places where there is no building code it is very natural to concentrate effort upon securing one. While it is true that we do want to secure the enactment of laws which will regulate the way houses may be built, yet the remedies which most people interested in housing reform are seeking will not be found in the ordinary building code.

It is important, therefore, at the outset to clearly distinguish between three kinds of building laws—a building code, a tenement house law and a housing law.

A building code is, as its title indicates, a code of laws dealing with the methods to be employed in the construction of buildings. It concerns itself chiefly with questions of building materials and processes. Housing reformers are not as a rule interested in these questions; in the quality of brick and mortar, in methods of fire-proofing, in the advantages of terra cotta as compared with reinforced concrete, in factors of safety, in dead and live loads, in wind stresses, in automatic sprinklers, in fire and water tests, in rivets and flanges of iron beams and columns, in wall thicknesses and similar technical questions. Important as these are from the point of view of safety and construction and the reduction of fire risk, they do not touch the questions which most vitally concern the welfare of the great mass of our people.

In other words, a building code does not so much affect living conditions as it affects the building industry. At best a building code is nothing more nor less than a gigantic specification. It is a document to interest architects and builders and manufacturers of building materials, not the housing reformer. As a rule, it is a long, detailed, abstruse, highly technical and uninteresting document, not understandable in most of its provisions by the layman.

Only in rare instances do we find in a building code provisions which deal with the conditions under which people live. Ordinarily no building code concerns itself with anything but the construction of new buildings. It is seldom that we find it dealing with the conditions which must be maintained in order that people may have sanitary homes.

It is apparent, therefore, that housing reformers will not find in the enactment of building codes the legislation which they are seeking.

The question then presents itself whether one should work for a tenement house law or for some other kind of a law. The answer to this question will depend very much upon the conditions which prevail in each city where the problem is taken up. In a city like New York, for instance, or Boston, or even Chicago, there are many reasons why housing reformers should seek at first at any rate to secure tenement house legislation. In these cities the tenement house is the type of dwelling in which the great mass of the people live. It is also the type in which the most serious evils are to be found. It is but natural under such circumstances that housing reformers should seek remedies for the worst conditions first.

Up to five years ago the course followed in America has been along these lines. Housing reform has been sought chiefly through tenement house legislation; that is, through laws which regulate the conditions in buildings in which many people live; and which deal not merely with the construction of such buildings when new, but also require the improvement of the older ones and the maintenance of all dwellings in a safe and sanitary condition.

Housing laws are essentially different from building laws. They concern themselves primarily with sanitary questions—with

light and ventilation, plumbing and drainage, intensive use of land, privacy, sewage disposal, egress in case of fire, reasonable fire protection, and to a large extent with maintenance and use, regulating conditions under which water-closets are maintained, prohibiting improper use of cellars, regulating and restricting basement and cellar occupancy, providing for adequate water supply in convenient places, insuring cleanliness and the keeping of buildings in repair, providing receptacles for waste materials of various kinds, forbidding the keeping of animals and similar improper use of the premises; they require a resident caretaker, prohibit overcrowding, forbid the taking in of lodgers, authorize the health department to vacate houses which are unfit for habitation, and generally require buildings to be kept in sanitary condition.

It is at once seen that such a law is materially different from a building code and that it concerns itself with totally different things.

The question, What is a tenement house? presents some difficulties. In most cities the law includes in this category buildings which are occupied in common as the home or residence of three or more families. In a few cities the standard is set at four families, but in recent years it more properly has been set at two families. The city of Chicago, for instance, in its ordinance includes as tenement houses all buildings occupied by two families or more. The tenement house law of the state of Indiana similarly sets the standard at two families, though New York City still keeps its standard at three families. Columbus, Ohio, has gone further. It not only treats all two-family houses as tenement houses but includes under many of the provisions of the same law certain types of one-family houses as well.

There is, of course, no reason why people who live in houses in which there are but two families should not be afforded the same protection against unsanitary conditions that is afforded to people who live in houses in which there are three families. All are equally entitled to light and air, proper drainage, modern sanitation, adequate water supply and the rest of the things which go to make up proper housing conditions.

One reason why housing reformers have heretofore confined

their efforts to tenement house legislation has been that they have necessarily in the beginning of this work, as a matter of policy, felt constrained to proceed along lines of least resistance and take up those conditions for which there would be the strongest public support.

Obviously, only in those cities where the tenement house is the prevailing type, will a tenement house law do much to solve the housing problem. In the great majority of cities, however, the tenement house is not the usual type but the exception. In most cities in America the great mass of the people live in one-family houses, many of them in detached houses; nevertheless, the housing evils which prevail there are the same evils that are found in the tenement houses of our larger cities.

Dark rooms, cellar dwellings, lack of drainage, inadequate water supply, overcrowding, the lodger evil, and the other countless evils encountered in our cities are found just as frequently in the small cottages in which the mass of the working people live as in the taller tenements of our older cities.

It is apparent, therefore, that housing reform to be effective must in most cities concern itself not merely with the tenement house but with the private dwelling.

There would be little difficulty in this were it not for the fact that any law which effectively regulates the dwelling in which the workingman lives must also apply to the mansion of the millionaire and the home of the average well-to-do citizen, who as a rule resents the idea that the house in which he lives needs regulation, and is consequently apt to oppose such efforts at housing reform.

The tenement house and the private dwelling are not the only types of buildings which need regulation. There are others which need it quite as much. It would seem that the time had come in America when we should regulate all buildings in which human beings live, and that it is folly for us any longer to permit dark rooms in any building where people dwell. A dark room in a boarding house or hotel is as dangerous as one in a tenement house; possibly in some ways more dangerous. Bad plumbing has the same bad effects in all buildings.

For these reasons the housing reformer should work for *housing* legislation; not merely for a tenement house law which in

most communities deals with one comparatively small and limited class, but for a law which affects all citizens, a law which makes dark rooms quite as impossible in the rich man's home as in the poor man's cottage, which makes a dark hall quite as illegal in a modern high-class, fireproof hotel as in a common lodging house.

The only kind of legislation that will do this is a law which affects all buildings in which people live, whether those buildings are private dwellings, two-family dwellings, tenement houses, apartment houses, flats, hotels, boarding houses, lodging houses, apartment hotels or bachelor apartments.

It is apparent that the scope of such a law is far wider than that of a mere tenement house law. The opposition to it will also be wider. And yet notwithstanding this, it is the kind of legislation to work for. By no other means can we secure right conditions.

It is, moreover, a rather restricted view to assume that one's duty as a good citizen is thus limited. It is also a short-sighted view; for it will be a question of only a few years when we shall have to take the second step if we do not take it now. And it is easier to make the advance in one step than in several. It is wise economy to make the momentum of the initial campaign carry through the broader law.

On the other hand, the term "tenement house" is something of an asset. One can rally to the support of tenement house reform a vast amount of public sentiment which does not respond so quickly in behalf of a mere housing law. The word immediately conjures up to the popular mind a picture of sordid, squalid conditions. When we hear of "tenement house reform" our minds instinctively revert to the city slum. But the public, we are glad to say, is becoming educated in this regard and is beginning to apprehend the significance of "Housing" in a way that it did not a few years ago.

But it is also a liability. When applied to the high-class apartment house or to the better grade flat, to the private dwelling or the two-family house, there is resentment on the part of many members of the community whose support we should otherwise have, because they feel that a stigma is being attached to their property and their homes. They resent the idea of a tenement

A MODEL HOUSING LAW

house law as applicable to the houses in which they live; for, their conception of a tenement house is the popular one.

These advantages and disadvantages are both lost when we work for housing legislation. While it is true that the stigma attaching to the tenement house label disappears, on the other hand we shall extend the opposition to new groups.

I see no escape, however, from this dilemma. If the laws are to be of any value they must have "teeth in them" and someone is sure to be hurt. This is inherent in the situation and cannot be avoided.

If we wish, therefore, to make our efforts of the widest influence we should seek housing legislation and not merely tenement house reform. The latter will do for a few cities, but will prove of little value to the great mass of communities in America. Housing evils are not confined to cities. Slums are found wherever people live, in small towns, in villages, even on the open prairie, and the only effective way to overcome these evils is through housing legislation; legislation which at first should apply only to the larger cities, but which gradually can be extended with little change to the smaller communities until ultimately every section of the state is embraced within its beneficent protection.

III

HOW TO USE THE MODEL LAW

HOW TO USE THE MODEL LAW

WHILE this book is called A Model Housing Law it is so only in the sense of being a working model upon which others may build. It is in no sense meant to be an ideal or perfect statute. It perhaps can be best described as "canned legislation." Its purpose is to save persons interested in housing reform many years of effort, and if rightly used should accomplish this purpose. It is intended to make unnecessary the painful operation of collecting the housing laws of all the different cities and states throughout the country, preparing a comparative digest of them, and slowly and painfully setting to work to construct a new law from these elements, cutting a piece here and adding a patch there, the result being a crazy-quilt of legislation which does not accomplish what is desired.

As all the housing laws in the United States are based upon three models, either the New York Tenement House Law or the present author's Model Tenement House Law, published in 1910,* or the Model Housing Law as published in 1914, it at once appears that there is little advantage to any community in thus collecting the laws of the different states and cities. At best all that one can get from them is to discover the local variations that have been made from the parent stock.

As a rule these local variations hinder rather than help. They frequently mean nothing more than a concession made to some individual on a local committee who has in mind some particular type of house and who declines to agree to a report or to support proposed legislation unless the particular point which he has in mind is favored. Concessions of this kind when copied in other communities without an understanding of the reasons which led to their enactment, do incalculable harm.

* Veiller, Lawrence: A Model Tenement House Law. New York, Charities Publication Committee, 1910.

A MODEL HOUSING LAW

In A Model Tenement House Law, the disadvantages of this method of procedure are pointed out. It may not be amiss to repeat some of the warnings given there.

Writing a housing law is a difficult task. It requires much time and effort and a good deal of technical knowledge. As usually done it is undertaken by one or two public-spirited citizens who come to the task generally unprepared. Unless guided by the experience of others the results of this kind of effort are apt to prove disastrous. The law prepared under such methods is as a rule found inadequate when put into practice. It is then discovered that many important matters have been overlooked, that some parts have been so drawn as not to accomplish what was intended, that others are so involved that they are understood neither by the officials who have to enforce them nor by the citizens who are called upon to obey them, and that there are loopholes in the law by which it may be easily evaded and often its whole purpose defeated.

It is because of these considerations that the Model Law has been evolved.

All those enactments which any city would wish to make to regulate past, present and prospective housing evils have been included. It has been prepared for practical use by laymen, as well as by lawyers and public officials, and has been kept as simple and concise in form as it is possible to make it.

Housing laws deal with the construction of new buildings, the alteration of existing ones, and the maintenance of all, and are therefore used by many different classes in the community: builders, architects, plumbers, owners, tenants, social workers. In most laws, especially building codes, the provisions which relate to different classes of buildings are jumbled together and the person using them is compelled to hunt through the whole law to find that part in which he is interested.

In this respect the Model Law represents a great advance. The various provisions have here been so classified that each person can quickly and readily find those matters which interest him. A builder need only consider the provisions of one chapter of the law; namely, that relating to New Buildings. A man wishing to alter his house will find everything bearing on it in one separate chapter entitled Alterations; the landlord will find grouped to-

gether under Maintenance in another chapter, all those provisions which govern the maintenance of such houses; and here too tenants and social workers will find what they want to know.

The law is accordingly divided into six chapters: Chapter I, General Provisions (including Definitions); Chapter II, New Buildings (divided into three divisions: Title 1, Light and Ventilation; Title 2, Sanitation; Title 3, Fire Protection); Chapter III, Alterations; Chapter IV, Maintenance; Chapter V, Improvements; and Chapter VI, Requirements and Remedies.

A special word of caution should be given in this connection. Some people have in their desire to "simplify" and reduce the bulk of the law because the law "looks so long" to them, sought to combine the various provisions and have disregarded this important plan of classification and thrown the various sections together. In every case where this has been done the result has been disastrous. The law thus evolved has been not only complicated and troublesome but has failed to remedy the evils involved.

Those seeking housing reform should realize at once that there is no way to enact a short housing law which will be adequate. There is no escape. If the conditions are to be adequately dealt with, the housing law must deal with all the important phases of the problem. No short cuts are possible. This is quickly demonstrated by going through the Model Law section by section and asking, "What sections can we safely omit?" It is quickly discovered that there are practically none.

A housing law to be appropriate should necessarily be adapted to local conditions. What is necessary and practicable in one city may not be necessary in another. In order to make such local adaptation easy, the plan has been adopted of printing in capital letters those standards which may vary in each city; thus, in the provision dealing with the percentage of lot which may be occupied, in the Model Law this has been fixed at SEVENTY per cent in the case, for instance, of interior lots not over 60 feet in depth. Some cities may wish to impose either a higher or a lower standard, to make this amount say 60 or 75; all that each city needs to do under the scheme of this law is to change the one word "SEVENTY" and leave the rest of the section as it is. The convenience of such a plan is obvious.

A MODEL HOUSING LAW

Where there is no featuring of a standard in this way it means that the requirement as written is deemed right for every city and should be enacted without change.

Too much emphasis cannot be placed upon adhering *strictly* to the phraseology and punctuation employed in the Model Law. Efforts should not be made to "improve" or "simplify" it. Every word, every comma has been weighed and has its exact and definite meaning. Many of the provisions have stood the test of many years' enforcement and interpretation.

Similarly, there are advantages in retaining the order of arrangement of the various sections and where possible the same section numbers. When *your* law comes to be tested in the courts, as it of course will, it will be helpful to be able to show the court that the provision under review is not some novel and untried venture, but that the *identical* provision in a very similar statute is to be found in the laws of Michigan, Minnesota and other states.

Following each section of the Model Law will be found copious notes and illustrative diagrams. While it is true that there are few sections of the law to which such notes are not appended, yet the plan has been to make no unnecessary comment but only to discuss those points which experience has shown are likely to give rise to difficulty and concerning which those using the law should be fully informed. The notes are in the form of a running commentary on each section, pointing out where there is any doubt the reasons which have caused its enactment and what is intended to be accomplished by it; also calling attention to ways in which its meaning may be misinterpreted and explaining wherever necessary to the lay mind all technical points involved.

Similarly, the illustrative diagrams which accompany the text are employed where it is felt that without them what is intended will not otherwise be plain, especially to persons not familiar with the technical aspects of the problems involved. These diagrams will be more useful to the layman than to the architect or builder, but will it is hoped prove useful even to them.

To persons especially familiar with the technical details of housing laws many of these notes may seem superfluous, but it should be remembered that the Model Law will necessarily be used by many persons who do not have this technical equipment.

HOW TO USE THE MODEL LAW

In addition to these explanatory notes it has been thought wise to build "a flight of steps" both up and down from each of the more important sections. In other words, while each section of the Model Law represents the best consensus of opinion as to what it is desirable and practicable to adopt, it is recognized that it will not always be possible for each city to enact every provision as written in the law. Concessions will necessarily have to be made to meet the views of various persons in each community, and it is important, therefore, for the housing reformer who is working for this result to know where he may safely make concessions and how far it is wise to go. In order to aid him to the greatest possible extent a flight of steps has been built leading down from each section. In other words, where concessions can be made a series of "Concessions" is indicated after the explanatory notes, and the exact phraseology of each concession is given.

On the other hand, it is also recognized that in many cities it may be possible to adopt higher standards than those established in the Model Law. There are many sections in which undoubtedly it would be wise if higher standards could be adopted. A flight of steps upward has therefore similarly been erected from each section and a series of "Variations" appended to those sections where it is believed that higher standards can be adopted. Here, too, the exact form of each variation is given in precise terms so as to aid those using the law to the greatest degree.

Equipped in this way, thus prepared to make the law stronger or weaker as may be necessary in each locality, it is believed that the housing reformer will be furnished with a complete armory of weapons with which to wage his fight.

This book would not be complete without a consideration, also, of what may be termed an Ideal Housing Law so far as light and ventilation are concerned. This is an attempt to do away with air-shafts and light-courts and other unsatisfactory makeshifts for direct light and air by permitting no dwellings to be erected which exceed two rooms in depth.

Whether American courts have advanced sufficiently at this time to sustain such legislation is a nice question. Whether they will or not, the author thinks it not inappropriate to include in

this book a suggestion indicating the direction in which an ideal housing law is to be sought.

A word of caution to those using the Model Housing Law.

There is a subtle temptation in the form of local pride which sometimes makes a group of housing reformers desire to have the law they draft seem more essentially their own. A distaste for "copying" and an exaggerated desire for individual expression lead them to change for the sake of changing, to fix other standards because they are theirs.

The result of this course has generally proved to be disastrous. The profitable course to pursue is the direct reverse. Every person who is using the Model Law as the basis of his legislation should approach it with the idea in mind that as few changes as possible should be made, and only those for which affirmative evidence can be presented.

The burden of proof is on him for every change or departure made from the standards therein established. His conception of his work should be to try and have the Model Law enacted in his community with the fewest possible changes, and no change should be made for which there are not strong and cogent reasons.

A failure to heed this advice has brought about disastrous and unexpected consequences; in several instances resulting in imposing unnecessary hardships upon real estate and in other cases defeating the very purposes the framers of such laws had in mind.

IV
A MODEL HOUSING
LAW

AN ACT

To promote the health, safety and welfare of the people by regulating the light and ventilation, sanitation, fire protection, maintenance, alteration, improvement and use of dwellings; to define the classes thereof, to establish administrative requirements and to establish remedies and fix penalties for the violation thereof.

NOTE 1: In order to base the act upon the foundations on which the Police Power of the State rests, viz., health, safety and welfare—it is good practice to write these important words into the Title of the Act.

Explan-
ation

*The People of the State of..... repre-
sented in Senate and Assembly, do enact as follows:*

NOTE: The enacting clause will vary in different states; it should be made to conform strictly to the form locally in use.

Explan-
ation

ARTICLE I

GENERAL PROVISIONS

SECTION 1. Scope of the Act. This act shall be known as the Housing Law³ of¹ and shall apply to every city, town and village in the state which by the last federal census had a population of TEN THOUSAND² or more, and to every other city, town or village as soon as its population shall reach TEN THOUSAND thereafter.

NOTE 1: Insert the name of the state in which it is proposed to enact the law.

Explan-
ation

NOTE 2: One of the perplexing questions that has to be faced at the start is how wide an application to give the act. If local conditions permit and it is feasible to have the act apply to all cities of the state

rather than to a few, it is of course better to give it this wider application. In Wisconsin some years ago a tenement house law which applied the same requirements to the rural districts that it did to the large cities was held by the courts of that state to be unreasonable and therefore void. On the other hand, in some states, Ohio for example, a law which does not apply generally to all cities throughout the state would be held to be unconstitutional and void.

While there will undoubtedly be many people who will wish to see the law apply to all parts of the state, it will not be good policy to attempt this at first. Such a provision is more than likely to insure the defeat of the bill in the legislature; for, the members from rural districts are likely to resent an attempt to regulate the conditions under which their constituents live. The people are not yet ready for such sweeping reforms. The ideal condition is to have a housing law apply to all classes of buildings used as the residence of human beings, whether located in the country or in the city. Recent investigations show that conditions exist in many villages and on the prairies that are as bad in some respects as those to be found in the slums of large cities. A dark room is equally bad everywhere. If the law is given this wider application, great care must be taken to see that all its provisions appropriately apply to the simpler conditions which prevail in rural, semi-rural and suburban communities. For example, the requirement of Section 47 for water-closets would be inappropriate in the country where there is no communal water supply. Similarly, in rural districts the provisions of Sections 99 and 100 relative to cisterns, wells and catch-basins are essential, but they are not appropriate for cities. The greatest difficulty in giving the law such general application is the lack of means of enforcing it in sparsely settled communities, and the cost of any system of inspection that will insure the maintenance of sanitary conditions. If this change is desired the following variation is suggested:

Variation

VARIATION 1: "Section 1. Scope of the Act. This act shall be known as the Housing Law of and shall apply to every city, town and village in the state."

It is Advised: To have the act apply at first to the larger cities, then after it has been tried out and put into successful operation for two or three years, to extend its application to the smaller cities, and later to all parts of the state.

NOTE 3: The advantage of the short popular title is to make it easy to cite the act in subsequent statutes and legal proceedings without the necessity of repeating each time a long title with the chapter number of the act and the various amendatory acts. In some states this method of citation is not permitted.

VARIATION 2⁴: "In the case of cities having a population of ONE HUNDRED THOUSAND⁵ or over, it shall also apply to all that territory immediately adjacent and contiguous to the boundaries of such city and extending for a radial distance of TWO miles⁶ beyond such boundaries in all directions." Variation

NOTE 4: In recent years there has been an increasing appreciation of the folly of permitting slums to develop on the outskirts of large cities, thus creating conditions which later on will cause trouble and expense to those cities when these outlying sections become a part of the city through annexation. Accordingly, this "Variation" has been formulated to deal with this situation.

In cases where the Model Law is enacted as a local ordinance rather than as a state law, it will not be possible to include such a provision; as it is not within the power of a city to legislate for territory outside of its corporate limits. It is of course entirely within the province of the legislature to determine how wide an application a law of this kind may have.

NOTE 5: It is probably wise at first to limit such a provision to the larger cities, but there is no reason why it should not ultimately apply to all cities. If that is desired, the wider application can be obtained by omitting the words "In the case of cities having a population of ONE HUNDRED THOUSAND or over."

NOTE 6: The distance to which the area of inclusion shall be extended depends entirely on local conditions. Two miles seems reasonable. Five miles would seem a maximum distance.

§ 2. DEFINITIONS.¹ Certain words in this act are defined for the purposes² thereof as follows. Words used in the present tense include the future; words in the masculine gender include the feminine and neuter; the singular number includes the plural and the plural the singular; the word "person" includes a corporation as well as a natural person.

Explan-
ation

NOTE 1: There is danger in definitions. One must be closely on one's guard. The tendency of the uninitiated is to try to define everything. This is both unnecessary and unwise. We are not writing a dictionary but a law. Every definition is a source of potential danger. If not skilfully or carefully drawn it may defeat the entire purpose of the act. It may not only fail to include all cases that should be included, but it is more likely to err in permitting evasion of the law on technicalities, through lack of precision. The result is disastrous in either case. No definition should be included that is not absolutely necessary nor any term defined that is not used in the act. Where words have a commonly accepted meaning, and it is not desired to change that meaning, they should not be defined. It is sometimes safer to leave some things undefined, as it affords greater opportunity for successful argument in support of the act in subsequent litigation. It is neither necessary nor desirable to define such words as "apartment," "story," "building," "street," "alley," "lot," and so forth. It will be found that all definitions necessary to a proper housing law have been included. None can be added without danger.

It will be generally found that there is a demand that what constitutes a "lot" shall be defined. This should not be done, however. If it is done, it is almost certain to result in unnecessarily restricting the use of property. A man should be free to make his "lot" whatever he wishes. It may be a piece of property 50 feet by 100 feet. But, if he wants to combine in one lot 200 feet by 100 feet, four such parcels of land and build one large apartment house on them, is there any reason why he should not do so? If the apartment house later burns down and he wants to redivide his property once more into four lots should

he not be free to do so? Any definition of lot in this law would not only be superfluous but would prove to be hampering. All that is necessary is to make sure that the requirements for adequate open spaces for light and ventilation shall not be evaded and that is done satisfactorily in the law by specific provisions prohibiting the reduction of such open spaces and the reduction of the lot beyond certain minimum requirements.

NOTE 2: The phrase "for the purposes thereof" is of importance; otherwise the act will have a wider effect than is intended. To impose the limitations of these definitions upon the operation of other statutes would of course be unwise. For example, in one of our states, the housing law defines a hotel as one having at least 50 sleeping rooms, whereas the excise law requires but 10 sleeping rooms. Under the excise law hotels with 10 rooms are given certain privileges as to the sale of liquor; these would be taken away from every hotel that did not have 50 rooms, were not the definition in the housing law limited to "for the purposes of this act."

§ 2 (1) DWELLING. A "dwelling" is any house or building or portion thereof which is occupied in whole or in part as the home, residence or sleeping place of one or more human beings, either permanently or transiently.

NOTE: This is a *housing* law; that is, it deals with buildings in which people *live*. It does not attempt to deal with places where people only work or assemble. It might very well be called a dwelling house law. Its provisions therefore relate to all dwellings, though some relate only to certain kinds of dwellings. The definition of dwelling is made as all-inclusive as possible. The determining factor is the sleeping place of the individual. As the act applies to all dwellings and includes the mansion of the millionaire and the modern high-class hotel as well as the cottage and tenement of the humble wage-earner, it must be drawn with the greatest care. Herein lies the greatest point of difficulty in the whole subject. Provisions which are at once admitted to be necessary for the protection of the poor tenement dweller, are resented by the rich or well-to-do member of the com-

Explana-
tion

munity, who thinks no law is necessary for him, and is often unable to see that in order that the community may be protected, laws must be general in their application, and that occasionally the individual must of necessity be restricted in greater or less degree.

§ 2 (2) CLASSES OF DWELLINGS.¹ For the purposes of this act dwellings are divided into the following classes: (a) "private-dwellings," (b) "two-family dwellings," and (c) "multiple-dwellings":²

(a) A "private-dwelling" is a dwelling occupied by but one family alone.³

(b) A "two-family dwelling" is a dwelling occupied by but two families alone, one above the other. A semi-detached or double house⁴ containing two families with separate entrances for each but under one roof and with a wall or party-wall between but no interior connection between the two parts of the building is to be considered as two private dwellings. A two-family dwelling which contains a store⁵ or other business space or is three stories in height, shall be deemed a multiple-dwelling and shall comply with the requirements for such dwellings.

(c) A "multiple-dwelling"^{2,6} is a dwelling occupied otherwise than as a private-dwelling or two-family dwelling.

Explanation

NOTE 1: The whole scheme of the law is to be found in the plan of classification herein embodied. Especial care has been taken to differentiate the three classes, private dwellings, two-family houses, and multiple dwellings of various kinds, thus permitting differentiation in the provisions relative to each class. That such differentiation is necessary is obvious. Provisions necessary for safety in large tenement houses or in tall hotels are not so necessary in small two-story private dwellings. Practically all of the provisions of the act with reference to fire protection will be found to apply only to multiple dwellings (Sections 53 to 64 inclusive). Similarly, other provisions proper for the maintenance of tenement houses are not so necessary in private dwellings. (See Sections 90 and 91.) Many of the provisions

of the act apply to all classes of dwellings; some apply only to multiple dwellings and a few only to one class of multiple dwelling. By means of this plan of classification it is possible to encourage the construction of private dwellings and two-family houses and to discourage the erection of tenement houses and other forms of multiple dwellings by making the provisions relative to the latter more stringent than those affecting the former classes. We are, moreover, on safe ground from a legal point of view in adopting this method of restriction, whereas we should not be if, for example, we attempted a definite prohibition against the erection of tenement houses. To impose more stringent requirements, in case of fire for instance, on tenement houses occupied by many families than on private dwellings, would unquestionably be maintained by the courts as a reasonable discrimination. The effect of these more stringent requirements in increasing the cost of construction may, however, so discourage the construction of buildings of this kind as to practically stop their erection.

NOTE 2: A great advantage of this scheme of classification is that it removes any stigma that may seem to attach to the word "tenement house." Because of the prevailing conception of such buildings, resulting from the use of the term in its popular rather than its legal meaning, there is often great objection on the part of owners and occupants of high-class apartment houses or costly mansions to have to comply with the terms of a "tenement house law"; when there would be little or no objection to compliance with a "housing law" which affects all buildings used for residence purposes.

NOTE 3: The word "alone" in (a) and (b) while seemingly unnecessary is essential. It will not do to let a small boarding house "occupied by but one family"—and several non-related individuals, as boarders—be classed as a private dwelling and thus escape the provisions of the act relative to multiple dwellings.

NOTE 4: The two-family dwelling which it is sought to encourage is the type of house with one family upstairs and one family downstairs, with separate entrances and hallways. It is in reality a two-story flat; but, without the disadvantage of common hall-

ways and other public parts of the building used in common that usually pertains to the flat. In different parts of the country nomenclature differs. In some sections such a house is known as a "double house" while in other sections the double house is two semi-detached private dwellings with a common roof and a party-wall between them. It has been found necessary to make this plain in the definition beyond any peradventure of doubt.

NOTE 5: A favorite way of "beating the law" in some states and cities is to erect a three story tenement with a store on the ground floor and two families above. By calling it a two-family dwelling it escapes the requirements of the act relative to multiple dwellings. After the building is erected, partitions are put up back of the store and the store-keeper's family moves into the rooms thus created. This provision will make such evasion impossible.

NOTE 6: It should be observed that no kind of dwelling can escape regulation under the act. For every dwelling that is not either a private dwelling (a) or a two-family dwelling (b) becomes under the act a multiple dwelling. Multiple dwellings are "all others."

§ 2 (3) CLASSES OF MULTIPLE-DWELLINGS.¹ All multiple-dwellings are dwellings² and for the purposes of this act are divided into two classes, viz. Class A and Class B:

Class A. Multiple-dwellings of Class A are dwellings which are occupied more or less permanently for residence purposes by several families and in which the rooms are occupied in apartments, suites or groups. This class includes tenement houses,³ flats, apartment houses, apartment hotels, bachelor apartments, studio apartments, duplex apartments, kitchenette apartments, and all other dwellings similarly occupied whether specifically enumerated herein or not.⁴

Class B. Multiple-dwellings of Class B are dwellings which are occupied, as a rule transiently, as the more or less temporary abiding place of individuals who are lodged, with or without meals, and in which as a rule the rooms are occupied singly. This class includes hotels, lodging

houses, boarding houses, furnished-room houses, lodgings, club houses, convents,⁵ asylums, hospitals, jails, and all other dwellings similarly occupied whether specifically enumerated herein or not.

NOTE 1: Multiple dwellings are divided into two broad classes; those which are used by families or groups of persons *permanently* as their home or place of residence, and those which are used more or less *transiently* by single individuals. The first class includes tenement houses, flats, apartment houses and similar types of buildings; the second class includes hotels, lodging houses, boarding houses and similar buildings. Some provisions of the act apply to one of these classes, other provisions to the other, while many provisions apply to both. Such differentiation is obviously necessary. To illustrate: in a tenement house it is appropriate to require each fire-escape balcony or other means of egress to open directly from each apartment, suite, or group of rooms; in the case of a hotel such a provision would be "impossible."

Explana-
tion

NOTE 2: While it is repetition to say "all multiple dwellings are dwellings" inasmuch as a multiple dwelling has been defined in Subdivision (2) (c) as "a dwelling," still it is wise to repeat it here so that there can be no question in the minds of the enforcing officials or of the courts that multiple dwellings must comply with the provisions of the act relative to dwellings.

NOTE 3: It is to be noted that the enumeration of the various kinds of multiple dwellings in Class A and Class B is in no way essential to the definition. The definition is complete without it. It is included solely to guide the enforcing officials and to illustrate to them and to the public what is meant. This enumeration will also aid those who draft the law by enabling them to consider whether each provision that applies to dwellings and to multiple dwellings can be properly applied to each of the kinds of buildings herein mentioned.

NOTE 4: The phrase "and all other dwellings similarly occupied whether specifically enumerated herein or not," is essential. All enumerations in statutes are dangerous unless safeguarded in this way by some general "drag-net" clause, as it may easily happen that there are other kinds of multiple dwellings than

those stated which may have been forgotten at the time of drawing the act, to say nothing of those which may come into existence subsequently.

NOTE 5: Formidable opposition to the whole Housing Law some times develops in the legislature because of the inclusion of these classes of buildings, viz., "convents, asylums, hospitals and jails" within the terms of the law. In such cases it is wise policy to omit specific mention of them. Such a change will in no way affect the operation of the law, for they will all be included under it, "whether specifically enumerated herein or not."

NOTE 6: This distinction may give some persons much concern especially with reference to "border-line" types such as apartment hotels, for example. This anxiety is generally quickly dispelled when it is pointed out that there are few provisions of the law which are different in their requirements for multiple dwellings of Class A and Class B. For quick convenience and ready reference so as to enable persons adopting the law to carefully weigh this consideration, the sections in which the provisions for the two classes differ in any respect are as follows: Sections 33, 46, 47, 48, 51, 59, 62, 85, 93, 98, 105 and 109.

§ 2 (4) HOTEL. A "hotel," for purposes of this act only, is a multiple-dwelling of Class B in which persons are lodged for hire and in which there are more than one hundred sleeping rooms, a public dining room for the accommodation of at least one hundred guests, and a general kitchen.

Explan-
ation

NOTE: This definition is made necessary by the fact that "hotels" may be exempted from certain provisions of the act. (See Sections 21 and 71.) The exemptions in question are advisable, if at all, only in the case of the tall modern hotel with accommodations for many guests, generally several hundred. It is to prevent these exemptions from applying to other kinds of buildings that this definition becomes necessary. Without it, the exemptions would apply to any building known as a hotel under any law, or even to a building popularly so known; now they will apply only to such buildings as are covered by this definition.

§ 2 (5) MIXED OCCUPANCY. In cases of mixed occupancy where a building is occupied in part as a dwelling the part so occupied shall be deemed a dwelling for the purposes of this act and shall comply with the provisions thereof relative to dwellings.

NOTE: Without this provision, we might have the anomalous situation of an office building or public school building being brought under the requirements of the act because the janitor and his family live there, and thus the building is "occupied in part as the home of one or more human beings." It is obvious that the provisions of this law which relate to dwellings should not apply to a building occupied chiefly as an office building, or public school, but should apply only to the parts of such buildings which are used for dwelling purposes.

§ 2 (6) YARDS. A "rear yard" is an open unoccupied space on the same lot¹ with a dwelling, between the extreme rear line of the lot and the extreme rear line of the house.² A yard between the front line of the house and the front line of the lot is a "front yard."³ A yard between the side line of the house and the side line of the lot and which extends from the front line or front yard to the rear line of the lot or to the rear yard is a "side yard."⁴ The length of a side yard is measured from the front wall of the dwelling to the rear wall of such dwelling, and not to the rear lot line.

NOTE 1: The words "on the same lot" are important. In many communities it has become the custom to build buildings close to the side and rear lot lines, sometimes on the line, having the rooms on that side or end of the house secure their sole light and ventilation from windows opening on the adjoining premises which have been left unbuilt upon at these points. This is not safe. When the adjoining premises are later built upon, as they are sure to be ultimately, the light and air are then shut off, with the result that a number of dark or semi-dark rooms are created. It is impossible then to remedy the conditions adequately. The evils of "borrowed light" are too great

Explan-
ation

to be safely permitted. Nor is it fair to permit one man to use another man's land for such purposes. The only safe and proper way is to require each person to leave proper open spaces on his own lot for the adequate lighting and ventilation of his own building.

NOTE 2: The phrase "between the extreme rear line of the lot and the extreme rear line of the house" is necessary for two reasons. One of these is the considerable number of irregular-shaped lots with rear boundary lines running at an angle as shown in Figure 1.

Without this phrase, the plan of leaving a clear open space at the rear of each building of a certain minimum size would be defeated. Let us assume,

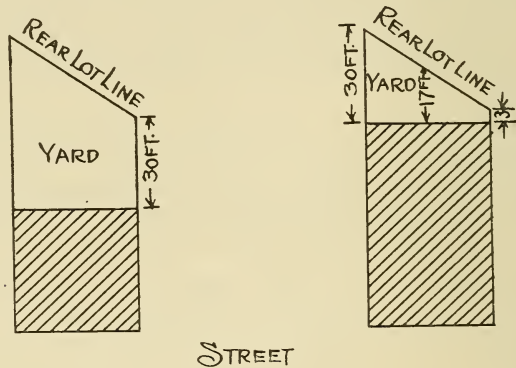


FIGURE 1

for instance, that the yard required to be left by law is 30 feet; if this phrase were not included, the yard could be left as shown in the right-hand diagram, instead of the full amount intended, as illustrated by the left-hand diagram. It is at once seen that in the first instance a very inadequate yard might result; namely, a yard only 3 feet deep at one point and but 17 feet deep at another and of varying depths between, instead of 30 feet deep at every point.

Similarly, without the phrase in question the law could be easily evaded in the case of lots of varying depth as shown in Figure 2.

What the law intends to require, namely, a clear

space of 30 feet at every point, is shown by the left-hand diagram; what could be done, if no specific provision made it impossible, is illustrated by the right-hand diagram. It is at once seen that it would be possible to have no yard at all for one-half of the building with the house at that point built all the way up to the lot line, thus creating dark rooms and defeating one of the primary purposes of the act. The dotted lines show what should be left.

The second class of cases which makes the phrase under discussion of importance is where the building instead of the lot, is of irregular depth, owing to the construction of extensions or the use of courts as shown on page 40 (Figures 3 and 4).

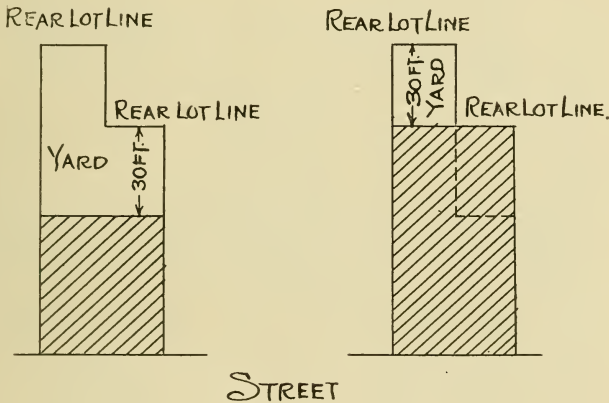


FIGURE 2

Here the law intends that the measurement of the rear yard shall be as shown in the left-hand diagram. Without the phrase "the extreme rear line of the house," it would be possible to build as shown in the right-hand diagram, thus defeating the primary purpose of this provision; namely, the leaving of an adequate open space at the rear.

Similarly, where courts are employed at the rear of the building there is equal opportunity for misunderstanding and evasion, as shown in Figure 4.

Here again what the law intends is shown in the left-hand diagram; what would be possible in evading the law, were not this point safeguarded, is shown by

the right-hand one. This whole question assumes importance in connection with Sections 22, 23, 31 and 72.

NOTE 3: It is necessary to define front yards, as otherwise they would under the definition of "courts"

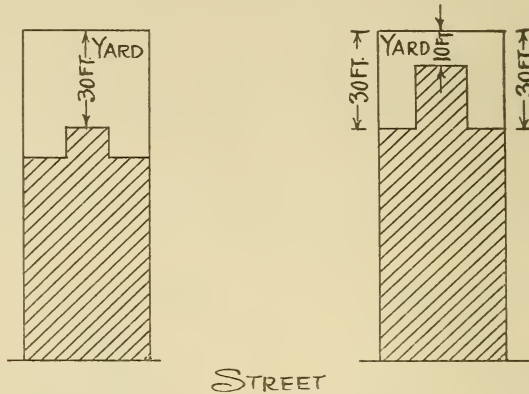


FIGURE 3

be treated as such and be subject to the requirements relative thereto. This would bring about the absurd situation that a man who wished to set back his house from the street line and leave a large front

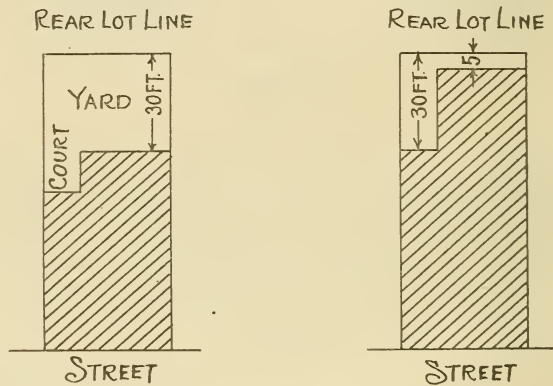


FIGURE 4

yard, voluntarily leaving more open space than the law requires, could not under some circumstances do so without being unduly penalized. (See Section 26.)

NOTE 4: "Side yards" which extend through from the street to the yard, *if of sufficient width*, are an excellent feature and should be encouraged as a much better kind of open space than courts. If they do not extend through, however, their especial value is lost and they become courts and should be treated as such and be required to be of greater width.

§ 2 (7) COURTS.² A "court" is an open unoccupied space, other than a yard, on the same lot¹ with a dwelling. A court not extending to the street or front yard or rear yard is an inner court.³ A court extending to the street or front yard or rear yard is an outer court.

NOTE 1: The comments under Note 1 on Yards, Section 2 (6) apply equally here. Explanation

NOTE 2: The scheme of the law contemplates only two kinds of open spaces; namely, yards and courts. Yards may be rear yards, side yards or front yards, as above defined. All other open spaces are "courts." Shafts (small enclosed courts) are ruled out. The term is one whose use should be discouraged. Courts are essentially of two kinds; namely, inner and outer. In the former the open space is enclosed by walls on all four sides (in some cases on three sides with the lot line acting as the fourth, but ultimately to be enclosed); in these courts all the light must come in over the top of the walls at the roof, and all the air in the same way unless other means of circulation is provided. Outer courts have always one end or side left open; namely, that adjacent to the rear yard, street or front yard, and are never enclosed on more than three sides (sometimes only on two sides, with the lot line acting as the third side). The light and air can therefore stream in through the open side.

NOTE 3: A lot line court of the type shown in the right hand diagram of Figure 5 on page 42 but opening on one side into a side yard is essentially an inner court and should be so treated. In measuring its width, however, it is only reasonable to count that portion of the side yard which extends for the length of the court as part of the court's effective width. It of course needs no intake as the side yard acts in that capacity. The following sketches show the main types of inner and outer courts. (Figures 5, 6 and 7.)

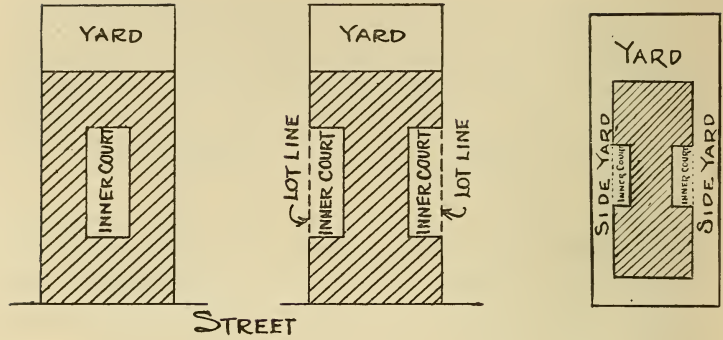


FIGURE 5
INNER COURTS

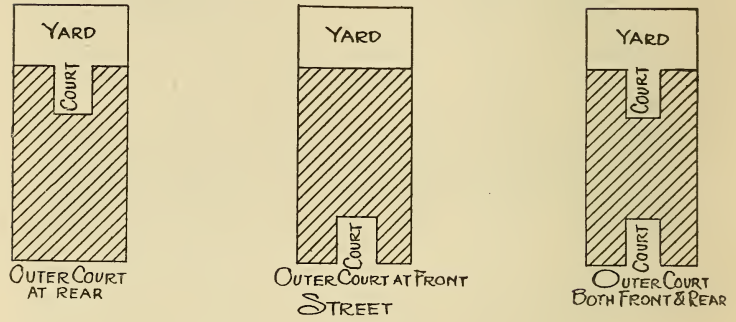


FIGURE 6
OUTER COURTS BETWEEN WINGS

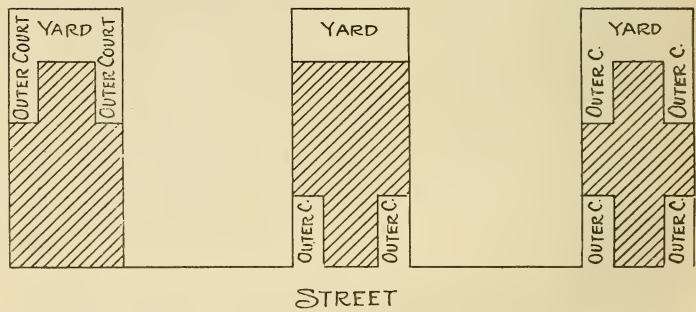


FIGURE 7
OUTER COURTS ON THE LOT LINE

§ 2 (8) CORNER AND INTERIOR LOTS. A "corner lot" is a lot of which at least two adjacent sides abut for their full length upon a street. A lot other than a corner lot is an "interior" lot.

NOTE: As buildings on corner lots secure much more liberal treatment in the percentage of lot which may be occupied and also may have smaller yards than those on interior lots, this definition is necessary. Interior lots are "all others." In some cities a third type is recognized, namely, "through lots," or those that extend through from one street to a parallel street. These are purposely not included here, as this type of construction is one that should not be permitted. It is not necessary in any city except in the closely built up business districts where it is considered desirable to utilize every inch of space, and where frequently it becomes necessary to have a large amount of continuous unbroken floor space. In residence districts these conditions do not exist. This method of building should be strongly discouraged even for business buildings, as it destroys any plan for block ventilation and violates some of the most elementary principles of intelligent city planning.

Explanation

It should be noted that under the provisions of § 2 (21) a public alley 16 feet wide or more is treated as a street. That means that a lot of which one side abuts the street and an *adjacent* side abuts such an alley would be treated as a corner lot and would be given the privileges which pertain to such lots. It should have these.

§ 2 (9) FRONT; REAR; AND DEPTH¹ OF LOT. The front of a lot is that boundary line which borders on the street. In the case of a corner lot the owner may elect by statement on his plans either street boundary line as the front.² The rear³ of a lot is the side opposite to the front. In the case of a triangular or gore lot the rear is the boundary line not bordering on a street. The depth of a lot is the dimension measured from the front of the lot to the extreme rear line of the lot. In the case of irregular-shaped lots the mean depth shall be taken.

Explan-
ation

NOTE 1: This definition would be unnecessary were it not for the triangular-shaped lots which border on three streets, in relation to which the question of where the yard is to be left becomes a doubtful one. Some ingenious architects and owners have sought to induce the public officials in such cases to rule that one of the streets is the "yard," thus permitting more of the lot to be occupied. To prevent this evasion of the law this definition is necessary. The following diagram illustrates the point at issue.

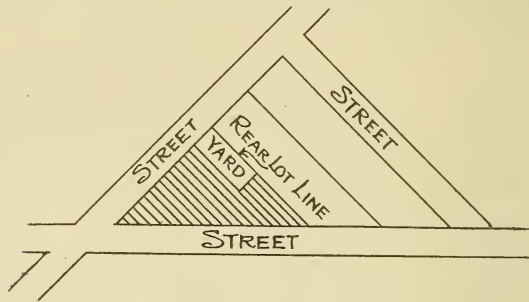


FIGURE 8

NOTE 2: It is wise to be liberal in the case of a corner lot and leave the owner free to place his entrance on either street frontage which may best suit his purpose, instead of attempting, as is done in some building codes, to lay down the hard and fast rule that the narrower frontage shall always be the front. There is nothing to be gained by this and it might work hardship in some cases. It should be noted that the entrance is not necessarily on the front; it may be on the side. This is important, as there are often local neighborhood reasons for having the entrance on one street rather than another.

NOTE 3: In cases where the end of the building faces the street, doubt has arisen as to where the yard should be left. The definition clarifies this point. (See Figure 9.)

The front is at A, the rear at B. It has been claimed that the front is at C, and the rear at D because the entrance to the house is at C, and that the yard should be

left along the line D D. Such a construction is absurd and would be prohibitive. The definition makes such an interpretation impossible

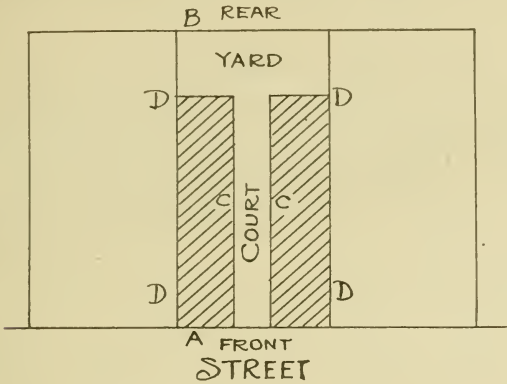


FIGURE 9

§ 2 (10) PUBLIC HALL. A "public hall" is a hall, corridor or passageway not within the exclusive control of one family.

NOTE: It should be noted that under this definition there are no "public halls" in a private dwelling, and that therefore the requirements of the act relative to public halls will not apply to such houses. This will also be the case in the usual type of two-family house, where separate hallways and entrances are provided for each family.

Explan-
ation

§ 2 (11) STAIR HALL. A "stair hall" is a public hall and includes the stairs, stair landings, and those portions of the building through which it is necessary to pass in going between the entrance floor and the roof.

NOTE: It should be noted that a stair hall is by this definition specifically declared to be a public hall, and therefore is subject to the requirements of the act relative to public halls.

Explan-
ation

§ 2 (12) WINDOWS. Windows required by this act may be either double hung, pivoted, hinged or casement sash. All the provisions of this act relative to the size and opening of windows shall apply equally to storm sash if used.

§ 2 (13) BASEMENT;¹ CELLAR; ATTIC. (a) A "basement" is a story partly underground but having at least one-half of its height above the curb level, and also one-half of its height above the highest level of the adjoining ground.² A basement shall be counted as a story.³

(b) A "cellar" is a story having more than one-half of its height below the curb level, or below the highest level of the adjoining ground.² A cellar shall not be counted as a story for purposes of height measurement.³ If any part of a story is in that part the equivalent of a basement or cellar, the provisions of this act relative to basements and cellars shall apply to such part⁴ of said story.

(c) Any part story, whether basement, cellar or attic,⁶ if occupied in whole or in part for living purposes shall be counted as a full story. Where, however, a dwelling is situated on a side hill and the conditions of grade are such that what would naturally be a cellar becomes a basement under this definition, such a basement shall not be counted as a story provided it is not occupied for living purposes; but only one such basement shall be thus exempt.

Explan-
ation

NOTE 1: There is much misunderstanding in the popular mind as to basements and cellars with a strong tendency to lump all underground rooms together in one objectionable class. This is neither fair nor wise. The two are quite different. Many basement rooms are fit for habitation; few cellar ones are. It should be borne in mind that a basement is a story which is in even the slightest degree below the ground. Some basements have their floors but a step or two below the sidewalk and are practically the equivalent of first floor rooms; to prohibit the occupancy of such rooms would obviously be unreasonable. Wherever the line is drawn it necessarily is a more or less arbitrary one, and a good case can be made out, at least on paper, against the "unreason-

ableness" of a requirement which permits the occupancy of a room whose ceiling is 4 feet 6 inches above ground, and forbids the use of an identical room whose ceiling is but 4 feet 5 inches above it. This argument applies to all cases where definite fixed standards are established; the man who falls just one side or the other will seem to be discriminated against. But these are chiefly arguments of the "enemy" for the purpose of discrediting the law. There are no real obstacles involved. As such standards apply to future construction it is quite easy for the individual to adapt himself to them without loss or hardship. The standard here established of half the height of the room above ground is the standard which has been in use for fifty years past. As it has proved satisfactory in that time and given no trouble it is continued.

NOTE 2: The most difficult question involved in the definition of basement and cellar is its adaptation to the varying conditions which exist in hilly communities. Here one may have a story that is a cellar in the front of the building, and a basement, or entirely above ground, at the rear, and vice versa. In such cases it would be unfair to prohibit the occupancy of rooms at the rear which are entirely above ground and meet all the requirements of the law in other respects. On the other hand, it is not wise to permit a builder to have his buildings one story higher in the rear than in the front through the simple expedient of excavating his land at the back part of his lot and carrying his yards and courts down, thus putting a whole story of his building below ground and below the level of neighboring property. (See Figure 10.) There is no city where underground living is a necessity. It is obviously undesirable. The definitions have been framed with the most minute care with these considerations in mind. It should be noted that in the case of basements a double condition is imposed (and similarly with cellars); namely, the ceiling must be one-half of its height above *both* the curb in front of the building and *also* above the *highest level* of the *adjoining ground*. This takes care of the conditions above described and illustrated in Figures 10 and 11. These show "sections through"—not plans.

Figure 10 illustrates the case where the land is

higher in the front than at the rear, either naturally so, or because the rear is excavated. The rear rooms in this cellar are entirely above ground and are fit for occupancy. The front ones are not. Figure 11 illustrates the opposite case where the land is higher

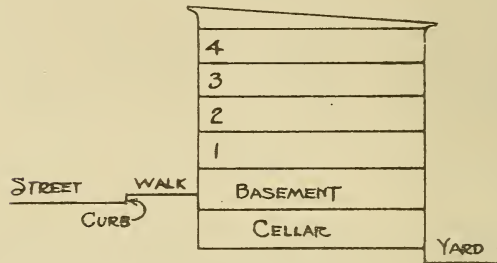


FIGURE 10

at the rear than at the front. Here the basement is fit for occupancy in the front part but not in the rear. If it were not for the double condition imposed by the definition requiring the height to be not only above the curb level but also above the highest level of the adjoining ground, it would be possible to have these objectionable rooms occupied in each case.

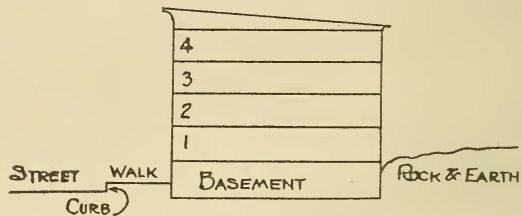


FIGURE 11

NOTE 3: "A basement shall be counted as a story, a cellar shall not be so counted." This at first sight seems unfair. Upon reflection it is found essential, as otherwise the plan for restricting the height of non-fire-resistive buildings to three stories could be easily evaded. Thus a man could build a three story and "basement" building, making the "basement" floor a

few inches below the entrance level; by this means he could get four full stories thus defeating the purpose of the act to keep non-fire-resistive houses down to three stories. (See Section 52.)

NOTE 4: The considerations which have been set forth so fully in Note 2 indicate the necessity of treating the different parts of a cellar or basement, or even of an upper story, separately, where there are varying conditions of grade. (See Figures 10 and 11.) Each portion should be treated on its merits.

NOTE 5: The above questions are important in connection with Sections 26, 31, 42, 43, 52, and 94.

NOTE 6: Attics present some difficulties. Where they are built there is danger that at some future time they will be lived in, and they are as a rule not fit for living purposes, especially in multiple dwellings. It would be simpler to rule them out but this is not practicable. People do not want all houses to be flat-roofed houses, and in private dwellings and two-family houses the peaked roof is the rule rather than the exception. Also there is a desire and need for the storage space thus afforded. There is, however, no such necessity for attics in multiple dwellings; the arrangement of the building changes that. This subject is important in connection with Sections 22, 23, 24, 25 and 52.

§ 2 (14) HEIGHT. The "height" of a dwelling is the perpendicular distance measured in a straight line from the curb level to the highest point of the roof beams in the case of flat roofs, and to the average of the height of the gable in the case of pitched roofs, the measurements in all cases to be taken through the centre of the front of the house. Where a dwelling is situated on a terrace above the curb level such height shall be measured from the level of the adjoining ground. Where a dwelling is on a corner lot and there is more than one grade or level, the measurements shall be taken through the centre of the front on the street having the lowest elevation.

NOTE: Where there are two grades, pressure will be brought to bear to have the measurements of height taken from the higher level rather than the lower, thus

Explanation

permitting a higher building. In some cases, depending on the steepness of the grade, this might result in non-fire-resistive buildings three stories high at one point and four or five stories high throughout most of the building, thus defeating the purpose of the law to keep non-fire-resistive buildings down to three stories. (See Section 52.)

§ 2 (15) CURB LEVEL. The "curb level" is the level of the established curb in front of the building measured at the centre of such front. Where no curb has been established the city engineer, or other officer performing such functions, shall establish such curb level or its equivalent for the purposes of this act.

Explan-
ation

NOTE: It will not do to let each irresponsible builder or owner fix the curb at such point as will best suit his purposes; this should be done by some responsible public official. As the curb level is thus fixed only "for the purposes of this act," to enable the enforcing official to determine measurement of height and the conditions of occupancy of basement rooms, the health officer is the best person to designate for this purpose. Such a provision is invariably not understood by members of the legislature and is often pointed to by those opposed to such legislation as evidence of the "impractical" nature of the measure. It is better not to furnish any ammunition to the enemy, and therefore leave this to be determined by the city engineer.

§ 2 (16) OCCUPIED SPACES. Outside stairways, fire-escapes, fire towers, porches,¹ platforms, balconies, boiler flues, cornices,² eaves, and other projections shall be considered as part of the dwelling and not as part of the yards or courts or unoccupied area.

Explan-
ation

NOTE 1: It is hardly debatable that the minimum open spaces left unbuilt upon for light and air should be left entirely unoccupied. A court or yard filled up with fire-escapes will prove of little value for light and ventilation. Some difficulties will be encountered, however, in the case of porches. In the smaller cities the back porch as well as the front porch is an insti-

tution, and even the side porch in the case of the detached house is much desired, especially in "double-houses." In such cases it is wise to permit these, but safeguarded as indicated in Concession 1. Add at the end of the first sentence after "unoccupied area" the following:

CONCESSION 1: "This provision shall not apply to un- **Concession**
enclosed outside porches not exceeding one story in height which do not extend into the front or rear yard a greater distance than TEN feet from the front or rear wall of the dwelling; nor to one such porch which does not extend into the side yard a greater distance than SIX feet from the side wall of the dwelling nor exceed TWELVE feet in its other horizontal dimension."

NOTE 2: Cornices are also troublesome. Where **Explana-**
the house has a peaked roof there is sure to be an overhanging cornice. This will do little harm at the front or rear but if not safeguarded will do great harm in completely shutting light and air out of the side yard. It is not uncommon to see two overhanging cornices of adjoining houses meeting over the side yards completely closing them in at the top and effectually shutting out a large part of the light. The limit of projection established in Concession 2 is the absolute limit. Add at the end of the section the following:

CONCESSION 2: "When cornices or eaves project into **Concession**
an outer court or into a side yard for a distance of more than EIGHTEEN inches, that portion in excess of EIGHTEEN inches shall be considered as part of the dwelling. Cornices or eaves which project into an inner court to any extent shall be considered as part of the dwelling."

§ 2 (17) FIRE-RESISTIVE DWELLING.¹ A "fire-resistive dwelling" is one the walls of which are constructed of brick, stone, cement, iron or other hard incombustible material and in which there are no wood beams or lintels and in which the floors, roofs, stair halls and public halls are built entirely of brick, stone, cement, iron, or other

hard incombustible material, and in which no woodwork² or other inflammable material is used in any of the partitions, furrings or ceilings. But this definition shall not be construed as prohibiting, elsewhere than in the public halls, the use of wooden floor³ sleepers, grounds, bucks, and nailing blocks when entirely embedded in incombustible material; nor of wooden finish flooring, and interior doors and windows, with their frames, trim and casings; nor of wooden interior finish when backed solidly with fire-resistive material; nor of wooden wainscoting up to a height of three feet from the floor. Wooden ceilings shall not be constructed.

Explan-
ation

NOTE 1: This defines a type of building known until recently as a "fireproof" building. In recent years the best authorities on Fire Prevention, notably the National Fire Protection Association and the National Board of Fire Underwriters have sought to get away from this misleading term; for, they have been quick to admit that there is no such thing as a "fireproof" building. The best any one can hope for is a "fire-resistive" one. The definition follows closely the definition of the National Board of Fire Underwriters in their "Recommended Building Code."

NOTE 2: This definition does not correspond to what may be termed the *extra*-fire-resistive building, in which it is required that all doors, windows, window frames, and trim shall be of metal and the use of wood anywhere is prohibited. Heretofore this extra-fire-resistive construction has not been thought necessary except in the case of buildings exceeding 150 feet in height. As this law does not contemplate the erection of any building over 100 feet in height, the matter of extra safeguards may safely be left to the local building code.

NOTE 3: Under this definition it should be noted that in "fire-resistive dwellings" ordinary wooden floors may be used as a carpet or finish on top of a structural floor of strictly fire-resistive material; but not in the public halls, which include the stair halls.

§ 2 (18) WOODEN BUILDING.¹ A "wooden building" is a building of which the exterior walls or a portion thereof

are of wood. Court walls are exterior walls. A building with wooden framework veneered with brick, stone, terra cotta or concrete, or covered with plaster, stucco or sheet metal is a wooden building for purposes of this act.

NOTE: This definition practically coincides with the definition in the "Recommended Building Code" of the National Board of Fire Underwriters. Explanation

§ 2 (19) NUISANCE. The word "nuisance" shall be held to embrace public nuisance as known at common law or in equity jurisprudence; and whatever is dangerous to human life or detrimental to health; whatever dwelling is overcrowded with occupants or is not provided with adequate ingress and egress to or from the same, or is not sufficiently supported, ventilated, sewerred, drained, cleaned or lighted, in reference to its intended or actual use; and whatever renders the air or human food or drink unwholesome, are also severally, in contemplation of this act, nuisances; and all such nuisances are hereby declared illegal.

NOTE: The common law right of every community to abate nuisances exists from time immemorial. The broadening of the definition as herein indicated, therefore, greatly increases the powers of the local officials and may prove a very valuable weapon if other powers granted under this act should be lost through the successful action of hostile interests. (See Sections 112, 113.) Explanation

§ 2 (20) CONSTRUCTION OF CERTAIN WORDS.¹ The word "shall"² is always mandatory and not directory, and denotes that the dwelling shall be maintained³ in all respects according to the mandate as long as it continues to be a dwelling. Wherever the words "charter," "ordinances," "regulations," "inspector of buildings," "health department," "board of health," "health officer," "department charged with the enforcement of this act," "commissioner of public safety," "corporation counsel," "mayor," "city treasury," or "fire limits" occur in this act they shall be

construed as if followed by the words "of the city, town or village in which the dwelling is situated."⁴ Wherever the word "city" occurs in this act it shall be construed as if followed by the words "town or village." "Inspector of buildings"⁵ means that public official charged with the enforcement of the laws in relation to the construction of buildings. Wherever the words "occupied" or "used"⁶ are employed in this act such words shall be construed as if followed by the words "or is intended, arranged, designed, built, altered, converted to, rented, leased, let or hired out, to be occupied or used." Wherever the words "dwelling," "two-family-dwelling," "multiple-dwelling," "building," "house," "premises," or "lot" are used in this act, they shall be construed as if followed by the words "or any part thereof."⁷ Wherever the words "city water"⁸ are used in this act, they shall be construed as meaning any public supply of water through street mains. Wherever the words "public sewer" are used in this act they shall be construed as meaning any part of a system of sewers that is used by the public, whether or not such part was constructed at the public expense. "Approved fire-resistive material" means as set forth by ordinances, or if not so determined, as approved by the inspector of buildings. The term "fire-resistive"⁹ applies to materials and construction which will satisfactorily resist fire in accordance with the specifications established by the United States Bureau of Standards of the federal government and by the Joint Conference on Fire Tests.

Explanation

NOTE 1: The purpose of this section is to simplify the language of the act wherever possible and avoid the necessity of constantly repeating a mass of verbiage in order to insure precision and prevent evasion of the law. What is done here enables us to "clear the decks" generally.

NOTE 2: In some cases the word "shall" has been held by the courts to mean "may." The effect of such a construction is to make vitally important sections of the law which should be mandatory and should be enforced in *all* cases, enforceable only in the discretion of the enforcing officials. This defeats the

purposes of the act and encourages graft and favoritism. For further discussion of the abuse of discretionary power see "Housing Reform," pages 90-94.*

NOTE 3: The phrase "the dwelling shall be maintained in all respects according to the mandate as long as it continues to be a dwelling" has the effect of preventing the subsequent alteration of the building otherwise than in accordance with the law.

NOTE 4: If the application of the act is limited to one city, this sentence should be omitted.

NOTE 5: In some cities there is no inspector of buildings. In such cases it is therefore necessary to provide for this contingency by permitting the mayor to designate the fire marshal, or fire chief, or police chief or some other appropriate person. Add after "the construction of buildings" the following:

VARIATION: "Where there is no such official, the mayor shall designate someone so to act for the purposes of this act." Variation

NOTE 6: This is vitally important; without it the whole law can be made of no avail. In the case of new buildings, an architect or builder could refuse to comply with the law on the ground that his building was not *occupied* by three families—being occupied by no one, not yet being built, and therefore did not come under the definition of a multiple dwelling. This is not a fanciful view, though it may seem so; there have been cities where this has been done and where friendly public officials have acquiesced in such an interpretation. The phrase "or is intended, arranged, designed, built, altered, converted" covers this loophole. Explanation

Similarly in some cities where occupancy by three families constitutes a building a tenement house, owners have adopted the device of temporarily putting out one family and then claiming that the building is not a tenement house as it is then occupied by only two families. This has been successful even where the building is a three-story one with three separate apartments in it and clearly arranged for occupancy by three separate families. The phrase

* Housing Reform. By Lawrence Veiller. Russell Sage Foundation Publication. New York, 1910.

“arranged, built, altered, converted to, rented, leased, let or hired out to be occupied” covers this loophole.

NOTE 7: Without this provision the law could be easily evaded. All that an owner would need to do to escape compliance with the law would be to have his building an “office” building, or “loft,” or some other type of building and use part of it as a dwelling or multiple dwelling.

NOTE 8: This is necessary; for, in some communities not only is water supplied to the whole town by private contract but even a system of sewage disposal is thus installed and maintained. Such a system for purposes of this act is the equivalent of a system of public sewers and communal water supply.

NOTE 9: This definition is the definition adopted by the National Fire Protection Association on the recommendation of its Committee on Nomenclature. It is based on the conclusions and deliberations of a joint conference of the following technical societies interested in the subject: National Fire Protection Association, American Society for Testing Materials, U. S. Bureau of Standards, National Board of Fire Underwriters, Underwriters’ Laboratories, Associated Factory Mutual Fire Insurance Companies, American Institute of Architects, American Concrete Institute, American Society of Mechanical Engineers, American Society of Civil Engineers, Canadian Society of Civil Engineers. The “specifications” referred to are in official use in the control of fire tests at the Underwriters’ Laboratories and by the U. S. Bureau of Standards. The specifications deal with the following subjects: Control of Fire Tests, the Time Temperature Control Curve, Determination of Temperatures, Test Structures, Test Sample, Fire Test, Fire Stream Test, Application of Water, etc. For further details of these specifications see pamphlet issued by National Fire Protection Association, 87 Milk Street, Boston, October 1918, entitled “Consolidated and Revised Reports of the Committee on Fire-resistive Construction for the years 1913-1918, inclusive.”

§ 2 (21) STREET. Wherever the word “street” is used in this act it shall be construed as including any public alley SIXTEEN feet or more in width. Where a street immediately abuts and approximately parallels a public

park, public place, railroad right of way, aqueduct, river or lake, ravine or similar formation assuring a permanent open space, the street, for purposes of this act, shall be deemed to include such above-named open spaces. Where such open space immediately abuts the rear of a lot so as to afford an open space the equivalent of a street or alley it shall be treated as a street or alley.

NOTE: In cities where there are alleys it is necessary to treat the larger ones that are public thoroughfares as streets. What the dividing line between street and alley is it is hard to say, but width and public ownership rather than private ownership are two determining factors at least. By means of this clause it is made impossible to erect tall dwellings on narrow alleys, as they must be treated as streets and the height of the building limited to the width of the alley. (See Section 21.) This clause also has an important bearing on Sections 28, 31, 37, 38, 48, 71 and 120. Without it, it would not be lawful to use an alley 16 feet wide as a means of light and ventilation. It is obvious that this should be permitted. It should be noted that only a *public* alley is to be deemed a street, that is, one of which the city owns the fee; this is eminently fair, as private alleys can be closed or abandoned and thus lose their value as a permanent source of light and ventilation. The determination of how narrow an alley should be recognized as a lawful source of light and ventilation will necessarily vary in each city, depending on the custom or prevailing width in that city. The standard in the law should harmonize with the prevailing local conditions so far as practicable.

Explan-
ation

§ 3. BUILDINGS CONVERTED OR ALTERED.¹ A building not a dwelling if hereafter converted or altered to such use shall thereupon become subject to all the provisions of this act relative to dwellings hereafter erected. A dwelling of one class if hereafter altered or converted to another class shall thereupon become subject to all the provisions of this act relative to such class.² The lawful taking in of roomers, boarders or lodgers into a private dwelling or two-family dwelling as authorized by section one hundred and

eleven shall not of itself be deemed to change the class of such dwelling to that of a multiple-dwelling, unless the health officer shall so decide.

Explan-
ation

NOTE 1: Without this provision the law can be completely evaded by erecting all new buildings in the guise of "alterations" to existing buildings. In a well-known Eastern city a few years ago when there was a somewhat drastic tenement house law on the statute books affecting only new construction, it happened that for a period of several years few new houses were built. Upon inquiry it developed that all building operations were "alterations." Plans would be filed for the "alteration" of an existing building; one portion of the building would be left standing while the new work was going on in another portion, and then the remaining portion would be torn down and the new work extended there until a completely new building was erected, without compliance with the law, as the law did not apply to alterations.

Irrespective of these considerations, it is obvious that it would be both unfair and unwise to permit the alteration of existing buildings to a changed use without enforcing compliance with the terms of the act applicable to new buildings, as the effect of such a policy would necessarily be to prevent the construction of new houses, thus perpetuating the evils of the older buildings and indefinitely extending their lease of life.

NOTE 2: In recent years with the serious house shortage that has developed throughout the country because of the almost complete cessation of building activities during the War, and the subsequent high cost of building due to high prices, strong pressure has been brought in several cities to permit the use of old private dwellings for multiple dwellings of various kinds without complying with the provisions of law which the Model Law requires to be observed in the erection of new multiple dwellings.

Notwithstanding the clamor of private interests that will arise—for, every owner of an old dwelling will naturally be desirous of finding a profitable use for property that has ceased to be profitable and will be urgent in demanding that the housing shortage be

met and that people without homes shall be housed— notwithstanding this, housing reformers should oppose to the limit any proposal to thus prolong the life of old buildings not suited for the use to which it is proposed to put them.

From time immemorial, as every report on housing conditions in America will bear out, the worst conditions are invariably found in this type of building, viz., the converted dwelling. If it is desired to create and perpetuate slums this is *the* way to do it, by legalizing the improper use of buildings that are unsanitary and a menace to both the health and safety of the occupants.

There is of course no objection to altering an old dwelling into a tenement house, provided the necessary sanitary and safety precautions are observed, just as would be done in the case of a new dwelling now being erected and as this section of the law requires. But what the owners of old dwellings want is permission to use these buildings without observing such precautions. If the old buildings have dark interior rooms in them—breeders of tuberculosis though they are—it will be found that the owners want to be permitted to use them; if the houses are fire-traps with inflammable wooden stairs and dangerous hall partitions—conditions dangerous enough for one family but unspeakably hazardous for three families—nevertheless, it will be found that the owners will still want permission to use the houses just as they are. Such things should not be permitted. No consideration of expediency nor insistence of private interests should be allowed to prevail over the clearly recognized necessity of protecting the health and safety of the community.

An additional reason against permitting such use of old buildings is the effect that such unfair competition will have on the production of new dwellings. Few new dwellings will be built so long as there are old buildings that can be turned to such use at almost no expense. No new dwelling that has to comply with all the provisions of a housing law can compete economically with an old building that has to comply with no provision of law. It is an unfair competition. It should not be tolerated. Builders and building material interests should be quick to oppose it.

§ 4. ALTERATIONS AND CHANGE IN OCCUPANCY.¹ No dwelling hereafter erected shall at any time be altered so as to be in violation of any provision of this act. And no dwelling erected prior to the passage of this act shall at any time be altered so as to be in violation of those provisions of this act applicable to such dwelling. If any dwelling or any part thereof is occupied by more families than provided in this act, or is erected, altered or occupied contrary to law,² such dwelling shall be deemed an unlawful structure, and the health officer may cause such dwelling to be vacated. And such dwelling shall not again be occupied until it or its occupation, as the case may be, has been made to conform to the law.

Explan-
ation

NOTE 1: This section should be read with care. It distinguishes between two kinds of dwellings; namely, those erected under the terms of the act, and those erected before its passage. It is obvious that it should not be possible to erect a new dwelling in compliance with the act and then a few years later alter it contrary to its requirements. If this were possible the law would not be worth much. In the case of dwellings erected before its passage, on the other hand, it would be unreasonable to forbid the alteration of such a building unless it complied with the requirements applicable to new ones. The effect of such a requirement would be to stop all improvement to the older buildings. What this section does is to prohibit the alteration of such a building so as to be at variance with the provisions relative to such buildings only and not to new buildings; namely, Articles III, IV and V. To illustrate, an existing dwelling built some years prior to the passage of the law might occupy 80 per cent of the lot, and it might be desired to alter this building in the interior, rearranging partitions, throwing several small dark rooms into one large lighter room, and thus greatly improving the conditions, but not extending the building, nor increasing the percentage of the lot occupied. Such an improvement should of course be permitted, but would not be possible if the law prohibited the alteration of an existing building except in conformity with the provisions of the act

relative to new dwellings, as is required in some carelessly drawn building codes. On the other hand, it should not be possible to create new dark rooms in an old building, where none were before. Both these points are safeguarded in this section.

NOTE 2: The special proviso as to change in occupancy is necessary because of the fact that the use and character of a building may be completely changed without any structural alteration whatever, merely by changed occupancy; without such a provision some courts have had a tendency to construe the law narrowly and hold that change in use is not alteration.

§ 5. DWELLINGS MOVED.¹ If any dwelling be hereafter moved from one lot to another it shall thereupon be made to conform to all the provisions of this act relative to dwellings hereafter erected. Except that in cases where such dwelling fails to so conform in some few technical² respects, the health officer may in his discretion³ grant a permit for the moving of such dwelling; provided, however, in his opinion the spirit of the law will be observed and no condition injurious to health or safety will result therefrom. In all such cases he shall file among the public records of his department a statement in writing duly signed by him, setting forth in detail the respects in which such dwelling fails to conform to the law and his reasons for granting such permit.

NOTE 1: An ingenious way of beating the law has been employed in some cities by moving an old building from one location to a lot that was before vacant, thus putting a new building where no building was before; as such building was not one "hereafter erected or altered," the law did not apply. This section prevents this method of evasion.

Explan-
ation

NOTE 2: It has been found in practice that in some cases considerable hardship results where the law requires a dwelling moved from one lot to another to be treated as a new building. Such dwellings may contain rooms that are a few inches less in area or in height than the minimum requirements for new dwellings. Obviously, they cannot be altered to conform

to the law except at prohibitive cost. It is therefore necessary to vest the enforcing officials with some degree of discretion in such cases, while at the same time safeguarding against the abuse of it. The friends of the law will need to be on their guard; if they are not careful, strong pressure will be brought to extend this use of discretionary power to other features of the law, with very serious consequences to the integrity of the whole law. For discussion of the abuse of discretionary power see "Housing Reform," pages 90-94.*

§ 6. DWELLINGS DAMAGED. If a dwelling be damaged by fire or other cause to the extent of not more than ONE HALF of its original value, exclusive of the value of the foundations, such dwelling in being repaired or rebuilt need not comply with the provisions of this act relative to dwellings hereafter erected, but shall comply with the provisions of the laws or ordinances in force prior to the passage of this act. If damaged to the extent of more than ONE HALF of such value, it shall not be repaired or rebuilt except in conformity with the provisions of this act relative to dwellings hereafter erected.

Explan-
ation

NOTE: In some communities considerable objection has been made even to this very liberal provision; strong individualists believing that if a man's house burns down he ought to be allowed to "restore" it exactly as it was. Where it is a slight fire he certainly ought to be able to restore it to its previous condition. But where the building is destroyed or approximately so, he ought not be allowed to perpetuate an outlawed type of construction, and foist upon the community an objectionable type of house and thus enjoy an unfair advantage over his competitors who would not be allowed to build such a house, if building anew. If strong opposition to this provision develops, it is suggested that the words ONE HALF be changed to TWO THIRDS.

§ 7. MINIMUM REQUIREMENTS;¹ LAW NOT TO BE MODIFIED. The provisions of this act shall be held to be the

*Housing Reform. By Lawrence Veiller, Russell Sage Foundation, New York, 1910.

minimum requirements adopted for the protection of the health, welfare and safety of the community.³ The local legislative body of each city is hereby empowered to enact from time to time supplementary ordinances imposing requirements higher² than the minimum requirements laid down in this act, relative to light, ventilation, sanitation, fire prevention, egress, occupancy, maintenance and use, for all dwellings. And such local legislative body is hereby further empowered to prescribe for the enforcement of the aforesaid supplementary ordinances remedies⁴ and penalties similar to those prescribed in this act. But no ordinance, regulation, ruling or decision of any municipal body, board, officer or authority shall repeal, amend, modify or dispense with any of the said minimum requirements⁶ laid down in this act.⁵ Wherever this act requires a greater width or size of yards or courts, or requires a lower height of building, or requires a greater percentage of lot to be left unoccupied, or imposes any other higher standard than is required in any local ordinance or regulation, the provisions of this act shall govern. Wherever the provisions of any local ordinance or regulation require a greater width or size of yards or courts, or require a lower height of building, or require a greater percentage of lot to be left unoccupied, or impose any other higher standard than is required in this act, such local ordinance or regulation shall govern.

NOTE 1: This "Home Rule" provision of the act is a vitally important one in its different bearings. In the first place, it effectively silences opposition to the act raised by special interests who are adversely affected by its provisions and who, as an effective means of choking off all legislation, seek to raise the "Home Rule issue"; namely, objection to the passage of a statute on this subject as distinguished from a local ordinance.* No one is able to advance any argument against the propriety of the state's embodying in the fundamental law the *minimum* require-

Explan-
ation —

* For discussion of the advantages of a state law as against a local ordinance, see Housing Reform, pp. 151-153.

ments necessary for the protection of the "health, welfare and safety of the community," especially when at the same time a liberal grant of power is given to each community to enact supplementary ordinances on this subject.

NOTE 2: The method herein employed also becomes at times the only practical way of harmonizing the conflicting standards of different cities in the same state where a provision of law that is acceptable to one city is felt to be too drastic by another city in which certain evils have become more firmly entrenched or where land values are higher or pressure of population greater. Standards can accordingly be set at a level that will satisfy all concerned and the cities which wish higher standards are free to adopt them by means of local ordinances.

NOTE 3: The declaration of the fundamental purposes of the act as an exercise of the police power of the state, embodied in the first sentence of this section, should prove helpful in litigation in the event of the constitutionality of the act being challenged.

NOTE 4: It is necessary to grant specifically to the local authorities the right to prescribe certain penalties and remedies for the enforcement of the supplementary ordinances, otherwise these ordinances may not be effective. A board of aldermen has not *ipso facto* the right to provide for injunction proceedings, proceedings *in rem*, and so forth. Unless otherwise provided by statute, a violation of a corporation ordinance is liable to be a "violation of an ordinance" and no more, punishable only by a small fine.

NOTE 5: The most important part of this section, in fact of the whole act, is found in this sentence, which seeks to prevent the misuse of discretionary power. There is little use in working out with minute care the standards to be observed to secure adequate light and ventilation, proper sanitation or safety in case of fire, if some local official has the power at any time to set aside or modify at his pleasure these essential requirements. In many cities boards of appeal exist in connection with the department of buildings, who exercise the power to modify and set aside the law in particular cases. Under the terms of this section no one, neither board nor official, will have such power so far as this law is concerned.

This is as it should be. Under no other method can we have proper law enforcement. Every citizen has a right to know that he is being treated on the same basis as everyone else and that no one can receive special privileges, and especially to know clearly what the law is and what can be done and what cannot be done.* If the law is wrong the thing to do is to amend it, whether it be a statute or an ordinance; not give to some administrative officer the power to set the law aside. Such a scheme undermines the basic principles upon which the government of this country rests. It will not do in this instance any more than it will in others to confuse the legislative, judicial and administrative functions. The laws should be made by the legislature, not by the inspector of buildings.

NOTE 6: It should be noted that the power given to the local authorities is to impose higher or stricter standards, and that they are expressly prohibited from lowering the standards embodied in the act. If such an attempt is made, as it is likely to be, such an ordinance in the face of this provision would be null and void.

§ 8. DWELLING CONSTRUCTION. Except as herein otherwise specified, every dwelling shall be constructed and maintained in conformity with the existing laws and ordinances.

NOTE: This provision is necessary, otherwise it may be claimed by shrewd attorneys that the passage of this act has repealed all existing laws and ordinances having to do with dwellings, such as a local building code, for example. All that is desired is to have this statute supersede any laws that may be in conflict with it. Most of the provisions of a local building code having to do with strength and quality of materials should, of course, be retained.

Explan-
ation

§ 9. SEWER CONNECTIONS AND WATER SUPPLY.¹ The provisions of this act with reference to sewer connections and water supply shall be deemed to apply only where con-

* For discussion of the abuse of discretionary power, see Housing Reform, pp. 90-94.

nection with a public sewer or with city water mains is or becomes reasonably accessible, and such connection shall be deemed to be reasonably accessible when such public sewer or city water mains are within a distance of one hundred feet of any outside line of the lot upon which the dwelling may be situated. Wherever there is no public sewer reasonably accessible, but there is city water,² the required plumbing for the dwelling shall be connected to a cesspool, septic tank or other means of sewage disposal approved by the board of health, provided that the nature of the soil is such in the opinion of the board of health that such device can properly take care of the sewage from said plumbing system. Where it is found by the said board of health to be impracticable, owing to the nature of the soil adjacent to said dwelling to construct such a device, a water-proof and fly-proof privy vault or other approved sanitary privy or similar device may be used temporarily³ for such dwelling until such time as a public sewer is provided reasonably accessible to such dwelling. Whenever a public sewer is so provided the owner of the dwelling shall at once connect the plumbing system of the dwelling with such sewer.

**Explan-
ation**

NOTE 1: It is, of course, impracticable to require running water where there is no city water, or to require the installation of water-closets where there is no public water supply. There are, however, cases where, while there is no sewer in the street in front of the house, it is possible to connect to a public sewer not far distant by means of a private sewer.

NOTE 2: It sometimes happens that there is a city water supply before a system of public sewers is installed. Under such circumstances there is no reason why the people should not have water-closets and bath tubs. With a proper system of cesspools or septic tanks as temporary expedients until public sewers are installed, the dangerous and malodorous privy vault need not be tolerated, thus doing away with the danger of fly-borne disease.

NOTE 3: At the time a house is built there may be no sewer adjacent to which connection can be made

and therefore a privy must be tolerated. A year later a sewer is extended to that neighborhood. The health officer should be free under these circumstances to order the privy removed, modern conveniences installed, and the house connected to the street sewer.

NOTE 4: The importance of this section is to be observed in connection with Sections 46, 47, 48, 49, 93, 98, 99, 100 and 124.

§ 10. STATE BOARD OF HEALTH. The state board of health shall have power to examine into the enforcement of this act in each city. Whenever required by the governor it shall make such an examination and shall report the results thereof to the governor within the time prescribed by him.

NOTE: This is a wholesome check on local boards of health and may prove to be useful where it is difficult to secure proper law enforcement. It is a power to hold in reserve and use only as a last resort.

Explanation

§ 11. TIME FOR COMPLIANCE. All improvements specifically required by Article V of this act upon dwellings erected prior to the date of its passage shall be made within ONE YEAR¹ from said date, or at such earlier² period as may be fixed by the health officer.

NOTE 1: It is but reasonable to allow a year's time to owners of the older houses to make those improvements in their buildings which are required as a matter of compulsion by the act (Article V), as some of these involve considerable expense.

Explanation

NOTE 2: It should be noted that the health officials are given power, however, to deal with exceptional cases immediately and to require the improvements in such cases at an earlier time. Thus in the case of a leaky and defective privy vault which required immediate attention, it would be possible to demand the prompt removal of the vault and the substitution of modern sanitary conveniences, instead of patching up the vault and then a year later removing it.

§ 12. APPLICATION. All the provisions of this act shall apply to all classes of dwellings, except that in sections where specific reference is made to one or more specific classes of dwellings such provisions shall apply only to those specific classes to which such reference is made. All provisions which relate to dwellings shall apply to all classes of dwellings.

ARTICLE 11

DWELLINGS HEREAFTER ERECTED²

In this article will be found the provisions which must be observed when a person proposes to build a new dwelling or to convert or alter to such purposes a building which is not a dwelling.¹

NOTE 1: The descriptive note which follows the caption of each Article is explanatory, and has little legal significance. It is, however, very useful to the layman who has to use the law and if it has to be omitted in the statute because of local legislative rules it should be included in the edition of the law subsequently printed by the city authorities for the use of the public.

Explan-
ation

NOTE 2: While each Article accurately states the extent of its application, namely, whether it applies solely to New Dwellings, to the Alteration of Dwellings, to Maintenance, or to the Improvement of Existing Dwellings, it is not safe to rely on these captions, owing to changes that may take place in the structure of the act through subsequent amendments. The only safe course is to have each section stand on its own bottom. Therefore, in every section which relates to new dwellings, the phrase "dwelling hereafter erected" is always repeated in each case; similar procedure is followed in the other Articles of the act.

NOTE 3: Following the custom in many states, gaps are purposely left in the numbering of the sections so as to provide for new sections which later it may be found necessary to enact, thus preserving the continuity of the numbering. Under this system Article 1 ends with Section 12, and Article 11 begins with Section 20. Article 11 ends with Section 62, and Article 111 begins with Section 70, and so on.

TITLE 1

LIGHT AND VENTILATION*

§ 20. PERCENTAGE OF LOT OCCUPIED.^{1, 2, 3} No dwelling hereafter erected shall occupy, either alone or with other buildings, a greater percentage of the area of the lot than as follows:

(a) In the case of corner⁴ lots with streets on three sides, not counting an alley as a street, not more than NINETY⁸ per centum;

(b) In the case of other corner lots, not more than EIGHTY-FIVE⁸ per centum;

(c) In the case of interior lots which do not exceed sixty feet in depth, not more than SEVENTY⁸ per centum;

(d) In the case of interior lots which exceed sixty feet in depth and do not exceed one hundred and five feet in depth, not more than SIXTY-FIVE⁸ per centum;

(e) In the case of interior lots which exceed one hundred and five feet in depth³ and do not exceed one hundred and fifty-five feet in depth, not more than FIFTY-FIVE⁸ per centum;

(f) In the case of interior lots which exceed one hundred and fifty-five feet in depth and do not exceed two hundred and five feet in depth, not more than FIFTY⁸ per centum;

(g) In the case of interior lots which exceed two hundred and five feet in depth, not more than FORTY⁸ per centum.

The measurements shall be taken at the ground level.⁷ No measurements of lot area shall include any portion of any street or alley.⁵ Any portion of a corner lot distant more than SEVENTY feet from the corner line, measured

* The standards set forth in this title for light should be materially increased in cities where smoke nuisance exists.

along the front line of the lot, shall be treated as an interior lot.⁶

Explan-
ation

NOTE 1: Although the public has become accustomed to thinking in terms of percentage of lot occupied, the limitation of lot area is of little practical value as a means of insuring adequate light and ventilation to all parts of a building. Many tenement houses have been erected in the past which have occupied but 50 per cent of the lot, but half the rooms in them have been totally dark and without ventilation, being either windowless rooms or opening on so small an air shaft as to secure neither light nor air. On the other hand, tenements covering 70 per cent of the lot have been erected and have had all their rooms well lighted and ventilated. The only way to secure adequate light and ventilation is to require every room, hall, bathroom, water-closet or other important part of the building to have windows of a certain size opening directly on an open space of sufficient size; either the street, the yard or a court. When this has been *properly* done, everything has been done that is necessary to insure adequate light and ventilation. No limitation on the amount of lot that may be occupied will do more.

NOTE 2: How little bearing the limitation of percentage of lot occupied has on the question of adequate light and ventilation is at once seen when one reflects that the percentage requirements in all such laws stay fixed at a definite amount and do not increase with the increased height of the building; thus, the percentage of lot that may be lawfully occupied in the case of a ten-story building is the same as laid down for a two-story building!

NOTE 3: Why then have any limitation on the amount of lot that may legally be occupied? it may be asked. There is one strong reason remaining for the retention of it. It is an effective means of preventing congestion or land overcrowding. In the case of deep lots it is the only thing which prevents the building of houses way back on the lot. The deeper the building the more rooms there will be in it, and in the case of multiple dwellings the more people there will be living on that amount of land. The way to prevent too many people living on a given amount of land, therefore, is to make difficult the building of

deep houses and tall buildings. These are the two factors.

NOTE 4: The plan followed here is to retain the percentage limitation solely for its value in preventing land overcrowding. This section therefore distinguishes in the first place between corner lots and interior lots, where the conditions are of course radically different, corner lots having light and air from the street on several sides of the lot. It then differentiates between the two kinds of corner lots, those with streets on two sides, and those with streets on three sides, imposing less restriction in the latter case than in the former. In the case of interior lots, the short lot is given more liberal treatment than the deep lot, and where lots exceed respectively 100 feet, 150 feet, and 200 feet in depth (105 feet is made the standard to be on the safe side and not cause hardship where lots are a few inches over 100 feet) to impose stricter conditions and prevent building to the extreme rear part of the lot.

NOTE 5: Streets and alleys are not part of the lot and should not be included in figuring percentage that may be occupied.

NOTE 6: Where does a corner lot end and an interior lot begin? is a question that has sometimes given trouble. This is of importance only in connection with this section and with §§22 and 23, relative to yards. As corner lots have greater privileges in these two respects than interior lots, unless some limit on their extent is imposed they might stretch almost indefinitely from one street to the next street, a distance sometimes of 400 feet, in order to secure the benefits to be obtained. The effect of this would be to defeat the purposes of the stricter requirements as to interior lots. To prevent this the arbitrary standard of 70 feet from the corner is imposed; beyond this point the rest of the lot is to be treated as an interior lot, both as to depth of yard and percentage that may be occupied. This is more liberal treatment than is usually accorded, as many cities require this at 25 feet from the corner, but it is wise liberality. The following diagram (Figure 12) illustrates the point involved.

The sketch shows a block front from street to street with a corner lot, 100 feet front and 100 feet deep.

At the point A, 70 feet from the corner, the remainder of the lot becomes an interior lot. From that point on the yard has to be 25 feet deep instead of but 15 feet, and but 65 per cent of the lot can be occupied in that portion (the shaded portion) instead of 85 per cent. The importance of this requirement is at once seen.

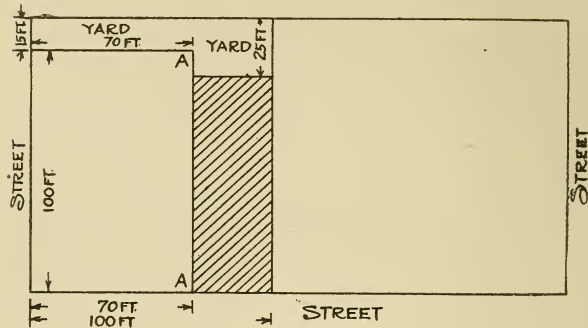


FIGURE 12

NOTE 7: The desirable condition is to have all open spaces—yards and courts—remain unbuilt upon all the way down to the ground. It is therefore provided that the measurements shall be taken at the ground level. But it is not always practicable to carry this point. In the case of hotels and apartment houses, especially the former, it is usually desired to utilize more space on the ground floor, and sometimes on the two or three lower floors, for public rooms—dining rooms, lobbies, lounging rooms, writing rooms, reception rooms, ball rooms, assembly rooms, etc. In such cases it is necessary to permit courts and yards and other open spaces to start at the top of the entrance story and sometimes two or three stories up. Little harm is done by this, provided all living rooms open on the proper open spaces, especially as the public rooms above mentioned will invariably in such buildings be ventilated by some system of forced ventilation and be lighted by electric light.

In a similar way in business districts it will be desired to have shops or stores on the ground floor of many flats and tenement houses. In such cases it is necessary to cover over much more of the land on the

ground floor, and in order to get a store of sufficient depth, the court, or part of it, will have to be occupied on the entrance story. Especially on corner lots where every foot of street frontage has a high value will the privilege of covering over the yard at the first story be desired. To meet these viewpoints, the following concessions can be made. Change the sentence "The measurements shall be taken at the ground level" to read as follows:

CONCESSION 1: "The measurements shall be taken at the ground level, except that in the case of hotels as defined in paragraph four of section two of this act, the measurements may be taken at the floor level of the lowest bedroom story; and in the case of other multiple-dwellings where there are stores or shops on the entrance story, the measurements may be taken at the top of such entrance story."

Concession

NOTE 8: This whole section, in view of the considerations expressed in Notes 1, 2 and 3 is an excellent one to make concessions on, especially as the interests affected will think in terms of percentage of lot occupied and will rate the law as drastic or not drastic largely on this section. If concessions need to be made, the following may be made with safety. Make the following changes in the featured standards of this section:

Explanation

- CONCESSION 2: (a) Change NINETY to 95
 (b) Change EIGHTY-FIVE to 90
 (c) Change SEVENTY to 75
 (d) Change SIXTY-FIVE to 70
 (e) Change FIFTY-FIVE to 60
 (f) Change FIFTY to 55
 (g) Change FORTY to 45

Concession

§ 21. HEIGHT.¹ No dwelling hereafter erected shall exceed in height the width of the widest street upon which it abuts nor in any case shall it exceed EIGHTY feet² in height. Such width of street shall be measured from front lot line to opposite front lot line.³ The provisions

of this section shall not apply to hotels⁴ as defined in paragraph four of section two.

Explan-
ation

NOTE 1: There is no city excepting New York in which this limit of height will prove a hardship so far as dwellings are concerned, with the exception possibly of hotels. This is the best way to limit the height of buildings. We are on safe ground here and such regulation will unquestionably be sustained by the courts, whereas a flat limit of so many feet might not be sustained. Limiting the height of buildings to the size of the open space on which they abut, in accordance with a scientific principle, is unquestionably a reasonable exercise of the police power. It can be demonstrated by inspection of existing buildings of any city that this represents the minimum standard which will insure sufficient light and ventilation to the building itself and to neighboring buildings.

NOTE 2: The flat limitation of 80 feet, irrespective of the width of the street, is important so as to safeguard conditions in cases where there are very broad streets, avenues, or boulevards from 150 to 200 feet wide. It is neither necessary nor desirable to permit dwellings to be built as high as this in any city. The standard of 80 feet which is fixed, is fixed to suit conditions where land values are at their highest. A more stringent requirement making the minimum height 60 feet would be nearer the ideal.

NOTE 3: It is necessary to specify that the width of the street shall be measured from front lot line to front lot line. In cities where there is no "official" building line, the first thing to do is to get a building line established.

NOTE 4: It is a nice question whether in the case of the high-class modern hotel provided with the comforts and luxuries which people nowadays demand, high buildings are not inherently a necessity. Such buildings cannot pay unless a sufficient number of guests are accommodated. To accommodate these the building must go up into the air; otherwise it would have to extend over so much ground as to be prohibitive in some cities because of the cost of the land, and in all cases it would make too great a distance for guests to travel horizontally inside the building in order to get to the dining rooms and other pub-

lic rooms. For these reasons, hotels as defined in this act should be exempted from this provision and the limitations on their height left to be dealt with in a general Zoning Act applicable to all buildings.

NOTE 5: In many cities the practice prevails of voluntarily setting back the house a considerable distance from the front lot line in order to secure a large front yard with lawn and driveway. Some architects believe that allowance should be made for such set-backs and that these should be added to the width of the street in calculating the limit of height. This is not, however, desirable nor is it necessary. There are practically no cities in the United States, outside of some of the large Eastern cities like New York and Boston, where the restriction as to limit of height proportionate to the width of the street as embodied in this section will present any difficulties.

The reason why set-backs of this kind should not be allowed to count as effective street width is because there is no way of insuring their continuity. One man may set his house back 25 feet, but the man next door to him may build his house right out to the property line. Under such conditions there is not a continuous open space of the proper size to insure adequate sunlight. Where streets are very narrow as in some parts of Boston for example, it may be necessary to build buildings higher than the width of the street by securing as a "near-equivalent" for the proper width, additional open space by setting back the front of the building. If it is desired to permit this, add at the end, just before "The provisions of this section shall not apply to hotels as defined in paragraph four of section two," the following:

CONCESSION: "Where a street is less than thirty feet in width, the width may be counted as twice the distance from the front wall of the proposed dwelling to the centre of the street." **Concession**

NOTE 6: In some cities where the intensive use of land is increasing, effort has been made to exempt from the provisions of this section apartment houses of a modern type, a few architects and investors wishing to build in these cities sky-scraper apartment houses similar to those of New York. In some cases

strong pressure will be exerted to exempt such buildings from the provisions of this section. It will be urged, for example, that the question of height limitation should be left to Zoning laws and it may be suggested that an amendment be offered to this section to the effect that this limitation shall apply "except where otherwise regulated by a Zoning law." While this suggestion has much plausibility and while for many reasons it is proper to determine height limitation by a Zoning law, the fact remains that there is an absolute maximum limit of height to which apartment houses may be built and a housing law is the proper place for the setting of such limits. There is practically no city in the United States other than New York City where it is either desirable or necessary to permit the building of apartment houses of the sky-scraper type, namely 150 feet high, such as have been built in New York (but built even in that city of high land values and congestion only to a very limited extent). It will be argued by architects and others seeking such privileges that if hotels in which many people sleep are permitted to go to a height of 150 feet, it is equally appropriate to permit apartment houses to go to that height; and it will be further pointed out that many apartment houses are really hotels, especially in cases where apartment hotels are contemplated and that it seems unreasonable and unfair to permit a hotel where people have only one or two rooms to go to a height of 150 feet and to forbid it where people have a suite of six or seven rooms. These are plausible arguments but are not sound. In the first place, it is against public policy and against the interest of a given community to encourage build-ings of excessive height. The experience of New York and other cities has proved this for all time. (See Report of Heights of Buildings Commission of the City of New York, 1913.)

In addition to the general undesirability of encouraging the sky-scraper apartment house there are definite affirmative reasons which make such build-ings absolutely impossible in cities other than New York. The chief reason is the fire hazard. Irrespec-tive of the provision that may be made for ample open spaces, and the relation of the height of such buildings to the width of street on which it is located,

the fire hazard alone is sufficient to warrant the prohibition of such buildings and it is this reason which clearly differentiates a building of this kind from a hotel. In a sky-scraper apartment house there are many apartments each one of which is occupied with an individual family with servants *and with individual kitchens*. If there are 30 families in a building, and there may easily be more, there are *30 individual sources of fire*. In a hotel there is one common kitchen under close supervision. Moreover, in apartment houses there are generally children and it is a well accepted fact that many fires start from children playing with matches. This is an additional risk. In addition, a modern hotel is under very close supervision at all hours of the day and night, and night watchmen are making their rounds in most hotels on the lookout for any possible source of fire or other danger. No such service is known in connection with an apartment house. A further and clinching argument against permitting apartment houses to be built to so great a height, lies in the inability of the fire departments of practically every city in America, excepting New York, to fight a fire in a building of such height. "The fire department cannot fight a fire from the outside more than 85 to 100 feet above the ground. Above that they must rely on the stand-pipes in the building. If the stand-pipe does not work or if the fire is so near the stand-pipe as to render its use impossible, the fire department becomes helpless" (see Report of Heights of Buildings Commission of the City of New York, 1913). In New York City apartment houses are allowed to go to a height of 150 feet on certain streets and in certain sections of the city because of the fact that there exists in that city what is known as a high pressure fire service. This service consists of specially installed water mains connected with pumping stations strategically located in different parts of the city and in which high pressure pumps are operating so that a stream of water can be sent to a very great height, as much as 300 feet or even more. There are no other cities in the United States where such service exists and for this reason alone if for no other, apartment houses should not be permitted to be built to a height greater than 100 feet in any city other than New York. The

report of the Heights of Buildings Commission of the City of New York previously referred to has this to say on the subject of high buildings:

"The fact remains, however, that tall buildings are not necessarily safe. The rooms are often filled with highly inflammable material. Unless doors are closed, fire may easily spread to other rooms. The draft up the chimney-like elevator wells may pull the flames across the corridor and the flames, fed by the grease on the elevator guides, may be carried to the upper floors."

NOTE 7: One of the cogent reasons for general limitation of the height of buildings in any city is the effect such buildings have on neighboring property. Too little attention has been given to this phase of the subject heretofore in this country. England with its law of "Ancient Lights" by which no building is permitted to be erected that obstructs the light of another building deals with it most effectively. That is why the sky-scraper is almost unknown in that country.

Recent studies of the shadows cast by sky-scrapers made by Herbert S. Swan and George W. Tuttle* are most illuminating on this point.

"The street plan and the building plan have been so poorly coördinated in Manhattan, for instance, that it is safe to say that a preponderating majority of the rooms in the existing shops, factories, offices and apartments of the borough receive no direct sunshine on the shortest day in the year.

"This is no less true of the residential sections than of the business sections. But the situation in the downtown financial district illustrates this condition most dramatically. There the shadows of different sky-scrapers, at noon on December 21, envelop large areas. The Adams Express Building, which is 424 feet high, casts a shadow 875 feet in length; the Equitable Building, which is 493 feet high, one 1,018 feet in length; the Singer Tower, which is 546 feet high, one 1,127 feet in length; and the Woolworth Tower, which is 791 feet high, one 1,635 feet in length.

"The effect of sky-scrapers casting shadows from a sixth to a third of a mile in length on surrounding property is well illustrated in the case of the Equi-

* Planning Sunlight Cities—American City Pamphlets No. 167.

table Building. Its shadow, which at noon on the shortest day in the year is about one-fifth of a mile in length, completely envelops an area of 7.59 acres. The ground area of the Equitable Building is only 1.14 acres.

"The shadow cuts off all sunshine from the Broadway façade of the United States Realty Building, which is twenty-one stories high. The New York Title & Mortgage Company Building, fourteen stories high, and the Washington Life Insurance Building, nineteen stories high, are both completely shaded. The south side of the Singer Tower is shaded to a height of twenty-seven stories. The nearest part of the City Investing Building, 400 feet away, is in shadow for twenty-four of its twenty-six stories. Even part of the New York Telephone Building north of Cortlandt Street is shadowed by the Equitable Building. For almost a fifth of a mile this giant skyscraper casts its shadow.

"Cedar Street, the street immediately north of the Equitable Building, has an average width of 34 feet between Broadway and Nassau Street. The height of the Equitable Building is $14\frac{1}{2}$ times the width of this street. On a north-and-south street of this width in New York, uniformly improved on both sides with buildings having a height equal to that of the Equitable Building, only 9.31 per cent of the windows would receive any direct sunshine at noon on the shortest day in the year. On such streets only the windows nearest the top for a distance equal to 1.35 times the width of the street would receive direct sunshine at noon on December 21 at New York (taking 40° north as the latitude), assuming the windows to be set in walls 14 inches thick. The windows in the thirty-four stories nearest the ground would receive absolutely no direct sunlight. Direct sunshine would only enter those windows in the four stories nearest the top. Not a single window within 447 feet of the street level would receive a ray of direct sunshine!"

"In the winter season no sunlight can, of course, be obtained on the south side of an east-and-west street. No adjustment in the height of buildings or in the street width can sunlight rooms having a northerly exposure. The remedy in such a case would be

to require the rooms to have windows exposed toward one of the other three points of the compass. This can readily be done in detached houses, but it is very difficult in attached houses. This condition suggests the advisability of reserving east-and-west streets for detached houses. North-and-south streets, on the other hand, may be developed with either attached or detached houses."

"The volume of sunshine received in rooms is of just as much importance as the sunshine period. A room, for instance, may enjoy direct sunshine for a considerable period and yet have a comparatively small portion of its cubic contents acted upon by direct rays from the sun."

"Thus a window the top of which is situated near the ceiling permits a deeper penetration of the sun rays into a room than one the top of which is placed some distance below the ceiling. The sunshine volume in rooms with windows opening to either the east or the west may be considerably increased by having the windows located as near as possible to the south wall of the room. Windows opening to the south should be placed as near the middle of the front wall of the room as practicable."

"Uniform building lines are highly desirable both in front and in rear. They not only conserve the supply of sunlight, but they also economize space. Buildings 'pocketed' at either end between deeper buildings receive much less sunlight than those conforming to a common building line, unless they are equipped with a side yard of sufficient width on the south to insure their own sunlight. The provision of such a side yard is usually so expensive a proceeding that it can be afforded only in private home districts."

"Inner courts should not be used at all."

§22. FRONT AND REAR YARDS.¹ A front yard may be any depth.² Immediately behind every dwelling hereafter erected there shall be a rear yard extending across the entire width of the lot.³ Such yard shall be at every point open and unobstructed from the ground to the sky,⁴ and shall be of the depths prescribed in the next section. Every

part of such yard shall be directly accessible from every other part thereof.⁵ The depth of said yard shall be measured at right angles from the extreme rear part of the dwelling⁶

(a) to the middle line of the alley,⁷ where a public alley immediately abuts the lot and extends across its entire width;

(b) to the rear lot line where there is no such alley;

(c) to the nearest wall of the building where there is another building at the rear as permitted in section twenty-nine.

In the case of corner lots abutting on three streets, not counting the alley as a street, the rear yard need not extend across the full width of the lot, but only to its median line.⁸ Any portion of a corner lot distant more than seventy feet from the corner line, measured along the front line of the lot, shall be treated as an interior lot.⁹ The provisions of this section shall not apply to hotels as defined in paragraph four of section two.¹⁰

NOTE 1: No subject in the entire law is of more importance than provision for a proper open space at the rear of the dwelling. This assumes especial importance in view of what has been said as to the lack of value of regulating open spaces through limiting the percentage of lot occupied, discussed under Section 20. To be logical we should require as large an open space in the rear of the dwelling as there is in front; in other words, if it is necessary to make the street 60 feet wide where the buildings on each side of it are to be not over three stories in height, it is obvious that it is necessary to leave a similar space between dwellings at the rear; that is, that there should be 60 feet from the rear of one building to the rear of another building on the next parallel street. In fact a space of greater depth should really be required at the rear because one cannot always be sure of this space being a continuous open space, thus insuring proper circulation of air and proper lighting of the rear portions of the individual building. This is always insured at the front as the streets are continuous airways extending often for many miles. The mini-

Explana-
tion

minimum requirements established in this section are based upon the assumption that there will be in most cases a neighborhood development, and that if one man leaves a rear yard of 30 feet behind his dwelling, in all probability his neighbor owning the lot abutting at the rear will leave a similar open space of 30 feet, making 60 feet between buildings. The largest open space possible that can be left at the rear is desirable and the standards established in this section are the minimum. It would be desirable to have even deeper yards if it were always commercially practicable. In this connection it should be noted

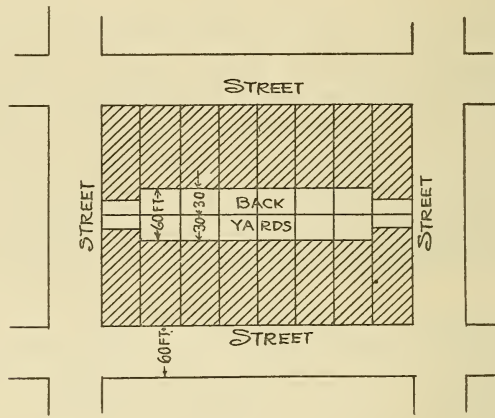


FIGURE 13

that with land values as they are at present in residence districts there are few cities in which it is commercially necessary in order to get a fair return on the investment, to make the rear yards less than the minimum depths herein established. This does not mean that interested parties will not wish to make the depths less. They will. But they should not be permitted to, and investigation will develop in practically every case that the minimum depths established in this section are less than the depths that have actually been voluntarily left by the majority of owners in recent building operations in each city.

NOTE 2: It is, of course, not necessary to require a front yard, as the rooms on the front of the house will get adequate light and air from the street. Desirable

as front yards or "set-backs" are from the point of view of adding to the attractiveness of a dwelling's appearance, they cannot be compelled by law. It obviously therefore would be unreasonable to attempt to limit the size of this open space left voluntarily by the owner and neither required by law, nor needed for light or ventilation.

NOTE 3: The requirement that the rear yard shall extend across the entire width of the lot is of importance. Without such a requirement attempts would be made to leave inadequate yards, as illustrated in Figures 1 to 4.*

NOTE 4: It is of great importance to require that the yard shall be unobstructed from the ground to the sky. Otherwise it would be possible to have fire-escape balconies and outside porches encroaching considerably on the open space which is so necessary to furnish light and air to the rear parts of the building. It is obvious that it is of little use to require a 15-foot yard for the purpose of light and ventilation and then allow it to be completely occupied by an outside porch or balcony, as is frequently the case in many cities. This provision is also to be read in connection with Sub-division 16 of Section 2.

In certain cases some objection will be made to the requirement that the yard shall extend from the ground to the sky. Permission will be desired to cover over either a portion of the yard or all of it on the ground floor. This will be especially sought after in the case of corner lots because of the value of street frontage, especially in districts where it is advantageous to use the ground floor for stores or shops. Similarly it will be desired to build over a portion of the yard on interior lots where it is wished to get a very deep store. A third case is the case of hotels, where the owners will want to build over the yard not only on the ground floor but also possibly to the height of two or three stories so as to secure the space necessary for public rooms such as dining rooms, ball rooms, music rooms, and for similar purposes. All of these points of view will have to be considered.

The considerations involved are quite different in the three different classes of cases. Taking up the

* See pp. 38, 39 and 40.

first, namely, covering over the yard on the ground floor in the case of corner lots: It is very desirable to have the yard extend to the ground where it is practicable, but where this is a matter that is much desired by the interests affected it is a point where a concession can wisely be made because of the reasonableness of the claim. There is no question as to the desirability of having the yard extend all the way down to the ground. That should be the practice in every case. On the other hand, there is from the point of view of the owner a hardship in not being allowed to utilize his property so as to get the full value out of the most valuable part of it; namely, the street frontage. If it is decided to recognize this situation and to make this concession the following modification could be adopted. After the words "in the next section," strike out the period, insert a comma, and add the following:

Concession

CONCESSION: "except that in the case of corner lots the rear yard may start at the top of the entrance story."

Explanation

The second class of cases where it is desired to cover over the yard on the ground floor on an interior lot, in order to secure a very deep store, is not at all in the same category. Such a concession should not be granted. It should be remembered that these provisions occur only in connection with dwellings, not with commercial buildings where the conditions of course are very different, and the only occasion where this becomes a practical question is where it is desired to have a store on the ground floor of an apartment house, or two-family house, or other kind of dwelling. So long as it is permitted to cover over the courts on the ground floor or part of them, it will be possible to get a store of sufficient depth without encroaching upon the yard space.

The third class of cases, namely, that of hotels, presents the most important considerations of all. It has been pointed out elsewhere in this book that it is necessary to build modern hotels to a considerable height and it will be seen from the table of Yard Depths in the next section that because of the requirement that the yard shall increase 5 per centum for each additional story above three stories, that where it is desired to erect a ten-story hotel a

yard of 60 feet, in the case of an interior lot, would be required, and in the case of a corner lot a yard of 50 feet. This would be prohibitive in most cities. No modern hotel should be erected on an interior lot. Practically all such buildings are erected on corner lots, with streets on three sides. So that the only thing to be considered is the relation of the provisions with reference to corner lots of this kind in its bearing upon hotels. For these reasons it is quite appropriate to exempt modern hotel buildings from the requirement for rear yards.

NOTE 5: The requirement that every part of the yard shall be directly accessible from every other part is made necessary where the rear lot line is of an irregular shape and where the lot has more than one depth, as sometimes happens, as shown in Figure 2.*

NOTE 6: It is necessary to measure the minimum depth of the rear yard from the "extreme rear part of the dwelling," otherwise claims would be advanced to be allowed to measure from the rear wall of the main building and not from various extensions, thus encroaching seriously on the minimum yard space. For further discussion on this point see Section 2, Paragraph 7, Note 2, pages 38-40, especially Figures 3 and 4.

NOTE 7: Some of the earlier housing laws were formulated with reference to conditions in Eastern cities where as a rule alleys do not exist. Irrespective of the undesirability of alleys, it is obvious that if there is a continuous airway extending through the centre of the block admitting light and air permanently (the alley must be a *public* one, otherwise it may some day be closed up) allowance must be made for such an open space in determining the minimum sizes of rear yards. It is reasonable in such cases to allow the measurements to be taken to the centre line of the alley.

As the primary purpose of requiring a rear yard is to insure an open space of adequate size at the rear of the dwelling for purposes of light and air, it is equally obvious that where there is no public alley, the measurements should be taken to the rear lot line; and where there is a garage or similar building on the rear of the lot to the front of such building,

* See p. 39.

leaving the minimum of open space between the two buildings.

NOTE 8: Where a dwelling is erected on a corner lot bounded by streets on three sides it would cause undue sacrifice of especially valuable property, namely, that with a street frontage, to require in such cases the rear yard to extend across the entire width of the lot. All proper purposes will be satisfied if under such circumstances the yard extends to the median line. It will thus afford an ample intake of air to insure circulation of air throughout the rest of the block. The following diagram illustrates this point. ADCA



FIGURE 14

is a corner lot bounded by three streets. The rear yard instead of extending all the way across the lot from A to A is allowed to stop at B, the point of intersection with the median line of the lot. It thus furnishes a means of renewing the air in the back yards of the lots R, S, T, U, etc., and the owner does not have to sacrifice valuable street frontage along the side AC.

NOTE 9: The question may be asked, Where does a corner lot end and an interior lot begin? In view of the greater liberality of the law toward corner lots, permitting smaller yards and a larger percentage of the lot to

be occupied, there is a direct incentive for the builder to evade the law's requirements and build over a very large frontage, and call it all a "corner" lot; later subdividing his building and selling off portions of it; that is, erecting several buildings in the guise of one, having all the buildings classed as one corner building instead of as one corner building and several interior buildings.

The line must be drawn somewhere. It has been set at 70 feet with a desire to be liberal to investors and builders and to be sure that a building 50 feet or more in width will be treated legitimately as a corner building. In most cities the line is drawn at 25 feet, but this is unnecessarily strict. Figure 12 (p. 74) illustrates how it is necessary to break back the yard at a point 70 feet from the corner in the case of a building being erected with 100 feet frontage.

NOTE 10: The reasons for exempting the modern hotel from the requirements of this and the following section are set forth in Note 4, p. 85.

§23. DEPTH OF REAR YARD. The depth of the rear yard required by the preceding section shall increase proportionately with an increased height of the dwelling and shall be proportionate to the depth of the lot as follows:¹ For purposes of this section the depth of the lot shall be measured from the front wall of the dwelling instead of from the front lot line.² If the dwelling is three stories high the depth of the rear yard shall be TWENTY³ percentum of the depth of the lot; if the dwelling is four stories high such depth of rear yard shall be TWENTY-FIVE percentum of the depth of the lot; if the dwelling is five stories high such depth of rear yard shall be THIRTY percentum of the depth of the lot; and shall thus increase FIVE⁴ percentum for each story. If the dwelling is less than three stories in height, the depths above prescribed may be decreased FIVE percentum for each story below three stories. In the case of corner lots if the dwelling is three stories high, the depth of the rear yard shall be FIFTEEN⁵ percentum of the depth of the lot. If the dwelling is four stories high such depth of rear yard shall be

TWENTY percentum of the depth of the lot and shall thus increase FIVE percentum for each story and may similarly be decreased FIVE percentum for each story below three stories. Irrespective of the above provisions, no rear yard under any circumstances shall ever be less than TEN feet in depth. The provisions of this section shall not apply to hotels as defined in paragraph four of section two.

NOTE 1: A distinct departure from the provisions found in similar statutes is made in this law in the method of regulating the depth of yards. Here an attempt is made to make the depth of the yard proportionate to the depth of the lot. This plan has been adopted because it has been feared that the methods heretofore employed of fixing arbitrarily a certain minimum depth in feet might not be sustained if tested as to constitutionality, because it would not be possible to show that such method of regulation was based upon a scientific principle. If all lots were the same depth this question would not be so complicated, but where lots vary from 60 feet in depth to 250 feet in depth, and even more, the subject is seen to be somewhat complex. Assuming that a 30-foot yard is the minimum sized yard that should be left for a three-story dwelling in most cities, it would be perfectly easy to require this in the case of lots 100 feet or more in depth, but there are many lots known as "tail-enders," having been cut off where the lots from another street have been subdivided in a certain way, which often do not exceed 60 feet in depth and sometimes do not exceed even 40 feet in depth. To require a 30-foot rear yard on a lot 40 feet in depth would, of course, be absurd and would have the effect of making impossible the development of such property. In addition it is very desirable to have some automatic method of regulating the evils of the deep lot and thus prevent the building far back on the lot of long, deep buildings which are responsible in large degree for lot overcrowding and congestion of population. (See discussion under Section 20.)

As the best means, therefore, of meeting all these conditions, the plan set forth in this section has been evolved. This gives an automatic control of depth of

building and depth of yard both on shallow lots and on lots of excessive depth. It does not make prohibitive the development of a short lot nor, on the other hand, does it give a short lot an undue or unfair advantage. It places all lots on the same basis in that the depth of the yard is proportionate to the depth of the lot. How this would work out in practice with lots of varying depths and for dwellings of normal height is shown in the following table:

INTERIOR LOTS—REAR YARDS (MEASURED TO MIDDLE LINE OF ALLEY)

HEIGHT OF BUILDING	DEPTH OF LOT							
	40 ft.	50 ft.	60 ft.	100 ft.	125 ft.	150 ft.	200 ft.	250 ft.
	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.
1-story—10% . . .	10 min.	10 min.	10 min.	10	12½	15	20	25
2-story—15% . . .	10 min.	10 min.	10 min.	15	18¾	22½	30	37½
3-story—20% . . .	10 min.	10	12	20	25	30	40	50
4-story—25% . . .	10	12½	15	25	31¼	37½	50	62½
5-story—30% . . .	12	15	18	30	37½	45	60	75
6-story—35% . . .	14	17½	21	35	43¼	52½	70	87½
etc.								

CORNER LOTS—REAR YARDS (MEASURED TO MIDDLE LINE OF ALLEY)

HEIGHT OF BUILDING	DEPTH OF LOT							
	40 ft.	50 ft.	60 ft.	100 ft.	125 ft.	150 ft.	200 ft.	250 ft.
	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.	Ft.
1-story—5% . . .	10 min.	10 min.	10 min.	10 min.	10 min.	10 min.	10	12½
2-story—10% . . .	10 min.	10 min.	10 min.	10	12½	15	20	25
3-story—15% . . .	10 min.	10 min.	10 min.	15	18¾	22½	30	37½
4-story—20% . . .	10 min.	10	12	20	25	30	40	50
5-story—25% . . .	10	12½	15	25	31¼	37½	50	62½
6-story—30% . . .	12	15	18	30	37½	45	60	75
etc.								

When it is remembered that alleys prevail in most cities and that these measurements are to be taken to the centre line of the alley, it becomes apparent how liberal this provision is from the point of view of the man who wants to develop his property.

For example, in the case of the shortest lot imaginable for building purposes, viz., a lot but 40 feet deep, it would still be possible to build a dwelling 30 feet deep leaving only a 10-foot back yard—the irre-

ducible minimum. As such lots seldom abut an alley at the rear, being "tail-enders," the 10 feet would be to the lot line.

In the case of a normal lot, say one 100 feet deep, the back yard would have to be only 20 feet. With a 16-foot alley at the rear, it would mean that only 12 feet of the lot would have to be given up to rear yard space. In such case, if the owner did not desire to set back his house at front or erect a garage at the rear, he could build his building 88 feet deep. This is obviously extremely liberal. If he elected to have a front yard or set-back, say of 30 feet, he could build his house 64 feet deep and have a back yard of 6 feet (14 feet to the centre of the 16-foot alley). This is also extremely liberal.

If the owner wanted to have a front yard or set-back say of 25 feet and also have a garage at the back of the lot 15 feet in depth, he would have to leave 15 feet between the dwelling and the garage (see Section 29) and could still have a house 45 feet deep. In the above instances if the dwelling were but 2 stories high, the conditions would be even more liberal.

When it comes to the deep lot, the scheme still works out in a way not to be unduly restrictive. Take the case of a lot 150 feet deep for instance: Here the owner could leave a front yard or set-back of 30 feet, leave a back yard of 16 feet (24 feet to the middle of the alley) and could have a house 104 feet deep if he wanted such a thing. Or, he could have a 15-foot garage at the rear, could set back his front 50 feet and still have a house 70 feet deep. What he would do, of course, would be to build his house the depth he wanted it and leave a much larger rear yard than the law requires. It is quite evident that this scheme will work out with entire satisfaction in most places.

NOTE 2: It is obviously unfair to penalize the man who voluntarily leaves a large front yard by making him increase also the size of his back yard. Therefore, it is provided that he may deduct this set-back from the depth of his lot for purposes of calculating the depth required for the back yard.

To illustrate: In the case cited under Note 1, on page 90 of a lot 100 feet deep and a front set-back

of 30 feet, such a lot would be considered only 70 feet deep and the back yard would have to be only 20% of 70 feet or 14 feet to the middle line of the alley—or only 6 feet off the lot.

NOTE 3: If these standards should seem to work hardship in any community (which the author very much doubts), it is suggested that the thing to do is *not* to depart from the *principle* of having the size of the rear yard proportionate to the depth of the lot, but to change the standards. Instead of having the rear yard 20% of the lot depth have it less, say 18%. Or, *per contra*, if the standards are too low and do not in a given community produce rear yards of sufficient size, change the standard from 20% to 22% or 25% or whatever may be desired.

NOTE 4: Naturally, the size of the rear yard, as in the case of other open spaces left vacant for light and air, should increase as the dwelling increases in height. Under the plan outlined here of a 5% increase per story the following results will be obtained:

YARD DEPTHS (LOT 100 FEET DEEP)

<i>Height</i>	<i>Corner Lots</i>	<i>Interior Lots</i>
1-story	10 feet min.	10 feet
2-story	10 ft.	15 feet
3-story	15 ft.	20 feet
4-story	20 ft.	25 feet
5-story	25 ft.	30 feet
6-story	30 ft.	35 feet
and so on.		

It will be seen that this automatically checks the erection of high buildings by imposing a requirement for a larger yard as the dwelling increases in height. This is deliberate. A high building in the case of dwellings is unnecessary, except in the case of hotels. Hotels have been exempted from these provisions for reasons already set forth. These requirements therefore can affect adversely only the apartment house or tenement; for, private dwellings seldom exceed 3 stories in height and two-family dwellings never exceed $2\frac{1}{2}$ stories.

There can be no question as to the desirability of preventing the erection of sky-scraper apartment houses and tenement houses. Outside of New York

City and possibly Boston, they are not a necessity. If a city like Chicago can limit the great mass of its apartment houses and flats to three stories, as it has done successfully for the past 10 years and more, there is no reason why every other city in America cannot do the same. The best way to do this is to penalize the building of excessive height by requiring much more open space to be left around it—a method, incidentally, which the courts will sustain.

NOTE 5: It will be noted that the standard laid down for corner lots is different from that laid down for interior lots. This is but right. A dwelling on a corner lot has streets on at least two sides and sometimes on three sides and has therefore much greater opportunities for light and air, especially for continuous air currents. In addition, street frontage is very valuable and the owner should not be required to sacrifice more of this than is absolutely necessary to insure the proper lighting and ventilation of his building. While it is provided that the depth of yard of a corner lot shall not be less than 15 per cent of the depth of the lot, this requirement is subject to the further requirement found later in the section, that no yard under any circumstances shall be less than 10 feet in depth. Thus in the case of a corner lot 60 feet in depth, it would not be possible to have the yard less than 10 feet deep, which would be over 15 per cent of such a lot. Ten feet is the irreducible minimum; a yard less than this cannot furnish adequate light and ventilation.

§24. SIDE YARDS; DISTANCE BETWEEN ADJACENT BUILDINGS.¹ In order to insure adequate light and ventilation and reduce the conflagration hazard and preserve the amenities¹⁶ of residential districts, no dwelling hereafter erected shall approach nearer at any point to any adjacent building than as prescribed in this section. The space between such dwelling and any adjacent building^{2, 3, 4}, at the side thereof, either on the same lot or on an adjoining lot, measured from the side wall of said dwelling to the nearest wall of such adjoining building, shall be deemed a side yard and shall be as follows:

(a) In the case of private dwellings⁷ hereafter erected

one story in height such space shall be not less than SIX feet; for such dwellings one and one half or two stories in height EIGHT feet; for such dwellings two and one half or three stories in height TEN feet and shall increase similarly TWO feet for each additional story or part story.

(b) In the case of two-family dwellings and multiple-dwellings⁷ hereafter erected such space shall be proportionate to the height of such dwelling and also to its length or depth, as follows: for such dwellings one story in height such space shall be not less than EIGHT feet; for such dwellings one and one half¹⁰ or two stories, TEN feet; for such dwellings two and one half or three stories, TWELVE feet; for such dwellings four stories FOURTEEN feet; and shall increase similarly TWO feet for each additional story or part story. Wherever such dwellings exceed SIXTY⁸ feet in length or depth, such side yard space shall be further increased throughout its entire width⁹ by TWO feet for every TEN feet or fraction thereof that such length or depth is in excess of SIXTY feet.

(c) Where the adjoining premises are unbuilt upon⁵ at the time said dwelling is erected, the full space required between the buildings as above provided, shall be left upon the same lot with the dwelling, measured from the side wall of the dwelling to the side lot line, unless the owner of said adjoining premises files with the county clerk of the county in which the dwelling is situated a written easement agreement binding upon him, his heirs, administrators and assigns that he will keep unbuilt upon and available for light and air a sufficient portion of his lot immediately adjoining such side yard to give the required space between buildings. The city, town or village through its corporation counsel, or equivalent officer, shall be a party⁶ to such easement agreement which shall not be dissolved without the city's consent. A copy of such agreement shall be filed in the office of the health officer with the plans for such dwelling, and shall also be there indexed by street and number;

(d) All of the above mentioned side yards shall be at

every point open from the ground to the sky, except as otherwise provided in paragraph sixteen of section two.^{11, 15}

(e) Nothing in this section contained shall be construed as preventing the building of dwellings in rows adjacent to each other with no space between them.¹³

(f) Nor shall anything in this section be construed as preventing the building of single dwellings of all classes right up to the side lot line, provided no room or public hall or other part thereof obtains the light and ventilation required¹⁴ by this act from windows located at such lot line or on any side yard less than the size required by this section.

(g) If any space is left it shall conform to the provisions of this section.¹⁴

Explan-
ation

NOTE 1: No section in the entire act will arouse so much opposition as the attempt to regulate the space between adjacent buildings and to require the leaving open of a sufficient space to give adequate light and ventilation. The ideal condition would be to require every dwelling hereafter erected to have plenty of open space on all sides of it. This is of course not practicable in large cities or in the well built-up portions of small ones, desirable though it may be. In such places it is often necessary to build houses in contiguous rows, "terraces" as they are called in certain sections of the country. In the case of apartment houses, flats and tenement houses, and many other classes of dwellings this is more often the rule than it is the exception. In the case of most private dwellings, however, except in the largest cities, and even in the case of two-family houses, it will still be found possible to leave an open space between the buildings. It has not been sought, therefore, in this act to impose a mandatory requirement against the erection of houses in contiguous rows. Such a requirement would probably be unconstitutional. It is, however, of great importance to make sure that adequate space is left between buildings where dwellings are not built solidly in rows. The prevailing practice in most of our cities is to leave a totally inadequate space; sometimes only a foot between buildings, often as little as 3 feet and only

in rare cases is anything like an adequate space provided. The purpose of leaving an open space at the side of a building is to furnish sufficient light and air to the windows of the rooms in the interior part of the building which do not open on the street or front or rear yard. It is far better that no space should be left than to have a space left which will furnish neither light nor ventilation but instead simply becomes a damp, dark pocket and gathering place for rubbish and waste material. Experience shows conclusively that no less than 16 feet should be left between dwellings. This will give a side yard of a minimum width of 8 feet on each side of each dwelling. With the width of lot that has been employed in the past in most of our cities, objection will at once be made to this requirement as "idealistic" and impracticable. It will be claimed that this requires the giving up of 16 feet of the width of the lot for side yards and that on a 25-foot lot this would leave but 9 feet for the dwelling, and that this is absurd,—which of course it is. Even on a 40-foot lot this provision will allow a dwelling only 24 feet wide, if the house is placed in the middle of the lot, and this is not large enough for the class of dwelling which it is desired to erect in many of our cities. The standards adopted in this section, therefore, represent as near an approximation to the ideal as it seems wise to go and should be treated as the *irreducible minimum*.

The standards of the Federal Government on this point in the "Standards for Permanent Construction" adopted March 7, 1918, by the U. S. Department of Labor and the U. S. Shipping Board in the housing of ship-builders and industrial workers during the War are most significant. These were:

"10. Open Spaces. Side yard space between adjacent buildings to be preferably 20 feet; minimum 16 feet; such space to be increased proportionately for each additional story, or part of story, above two stories. If this space is not obtainable because of lot sizes or land values, houses should be built in rows or groups."

And these are standards which were adhered to in all government houses built with the two hundred million dollars appropriated by Congress for the housing of war workers.

It is at once seen that the standards cited are immeasurably higher than anything attempted in this law. They are what *should* be required in this law, however, and in the laws of all states. Anything less than 16 feet between adjacent two-story dwellings is inadequate and will not furnish sufficient light and air, nor provide the amenities of civilized life. There is, however, a vast difference between the standards that may be adopted in operations such as the Federal Government undertook during the War (where as a rule acreage property was bought and lots were made whatever size was desired) and a mandatory law which affects practically every unimproved parcel of real estate in a given city. Where property is already subdivided and lot sizes have become fixed, it is often difficult, if not impossible, to adopt the standards that should be adopted, without disturbing real estate values to too great an extent. For these reasons, the low standards established here have been adopted. They are just half the standards of the Federal Government.

The chief difficulty is met in cities where the prevailing lot unit is one of narrow width, 25 feet or 30 feet. To leave 16 feet between adjacent buildings on lots but 25 feet wide, would leave only 9 feet of the lot width available for building purposes, which as already pointed out is of course an impossible situation. With 30-foot lots it is not much better.

It is no exaggeration to say that the success or failure of the entire housing law may hinge upon the skill with which these requirements for side yards are adjusted to local conditions. It is, therefore, of the utmost importance before determining what the standard shall be in a given city to have complete and full information as to the existing conditions and the then practice in that community.

This means that an exact and careful inquiry should be made as to the lot units that prevail in that community especially with reference to the width of lot unit. These facts are known in a general way to the leading real estate men of the town. They should be ascertained accurately; this requires no great expenditure of time or effort.

Similarly, it is equally important to know accurately what the current practice or fashion of housing

is in each community with reference to the method of placing the house upon the lot; and what the prevailing type of house is that people desire to build, especially as to width. If, for example, in a given community the lots are uniformly 50 feet wide and no one is accustomed to building a house wider than 24 feet, it is obvious that a requirement could be adopted with perfect safety calling for side yards of 10 feet on each side of new dwellings, thus leaving 20 feet between adjacent dwellings. If on the other hand, however, in a given community it develops that the prevailing lot width is 30 feet and the kind of building that people desire to have built is a dwelling 22 feet wide it is obvious that no more than 8 feet can be left between adjacent dwellings. This is entirely inadequate and so small a space ought not to be left, but it may be the part of wisdom to set the standards as low as this and not jeopardize the passage of the entire act.

NOTE 2: One of the chief reasons why the attempts made in housing laws based upon the Model Housing Law during the past five years to set adequate standards for side yards have given rise to difficulty, has been due largely to the fact that it was attempted (as provided in the earlier edition of the Model Housing Law) to fix definitely the distance from the side wall of a new dwelling to the side lot line, upon the assumption that each dwelling must stand on its own base and that adequate light and ventilation must be provided around it irrespective of neighboring conditions. Theoretically, this was sound but it did not always work out advantageously in practice.

All that a housing law need concern itself with in this respect is to make sure that there is adequate open space for light and ventilation and fire protection between adjacent buildings. The practical thing, therefore, is to permit the measurement of such open space to be taken from the wall of one building to the wall of the nearest adjacent building, irrespective of where the lot line may be. The disadvantages of this more liberal method of treatment are that at some future time the adjoining dwelling which at the time may have a large side yard, may later be torn down or may burn down and a new dwelling may be erected nearer to the lot line; in that case reducing considerably the available amount of light and air between the two

buildings. Weighing the whole question carefully, it seems that this is the lesser of the two evils and that it is better to take a chance on the adjoining building's ultimately being torn down than it is to impose standards which because of unfortunate property subdivisions cannot be applied without working undue hardship.

NOTE 3: Another important advantage in measuring the side yard space to the wall of the nearest adjacent building is found in those communities where the local custom prevails of not putting the house exactly in the centre of the lot. In some cities, and there are quite a number of them, it is the custom to leave a much larger side yard on the south side of the building than on the north. Where the owners of the adjacent property adopt this practice, there are no disadvantages; for, the space between buildings is maintained at the same amount as if the houses had been placed directly in the middle of each lot. To illustrate: Take the case of a city where the lots are 40 feet wide and the owners are building houses 30 feet wide. This leaves 10 feet available on the two sides for side yards for purposes of light and air. Instead of placing the house in the centre of the lot and leaving 5 feet on each side of it the custom prevails of leaving a side yard on the southerly side of the dwelling of 7 feet and on the northerly side of 3 feet, the adjacent owners employing the same practice. There is then 10 feet between each pair of buildings, the same amount that would result if 5 feet were left on each side. With the increased use of the automobile this method of placing the house on the lot assumes new importance for it is necessary to get access to the garage at the rear of the lot and it is a very common method of doing this to have a side yard between two houses 10 feet wide. Moreover, the larger side yard on the southerly side of the house has advantages from the point of view of people who have gardens and who wish to plant flowers along side of their houses; for, it insures them a wider exposure and therefore more sunlight.

As illustrative of the results that would be obtained under the standards suggested in this section, the following table is appended for convenience of reference:

HEIGHT OF BUILDING	SIDE YARD WIDTHS			
	Private Dwellings		2 Family & Multiple Dwellings	
	Space Between Buildings	Space on Each Lot	Space Between Buildings	Space on Each Lot
1 story	6 ft.	3 ft.	8 ft.	4 ft.
1½ stories	8 ft.	4 ft.	10 ft.	5 ft.
2 stories	8 ft.	4 ft.	10 ft.	5 ft.
2½ stories	10 ft.	5 ft.	12 ft.	6 ft.
3 stories	10 ft.	5 ft.	12 ft.	6 ft.
4 stories	12 ft.	6 ft.	14 ft.	7 ft.
5 stories	14 ft.	7 ft.	16 ft.	8 ft.
6 stories	16 ft.	8 ft.	18 ft.	9 ft.
etc.				

NOTE 4: In cities where lots are narrow and where it is practically impossible to leave adequate space between adjacent buildings because of that fact, and where the people are unwilling to resort to the row or group type of house with no side yard between, it is sometimes suggested that the housing law should impose totally inadequate standards as to side yards, something like 3 feet between adjacent buildings for the older parts of town where the property is already subdivided and cannot be changed; and then to require more adequate side yards in the newer subdivisions. There is considerable doubt as to whether such a plan would be held by the courts to be constitutional. The courts might hold that it was an unreasonable discrimination not to permit the property owner in the new part of the town to occupy as much of the land as the property owner in the older part of the town. It is not a solution of the difficulty that commends itself to the writer. Where such a situation exists, he believes that the thing to do is to insist upon having the right standards and to say as the Federal Government has done in its Permanent Standards which will be found in Chapter VII, pages 341-372.

"If this space is not obtainable because of lot sizes or land values, houses should be built in rows or groups." In the great majority of cases where the

lots are as a rule 20 or 25 feet or even 30 feet wide if it is sought to impose proper standards for side yards in a housing law, it will mean that the dwelling house will be built on 2 lots (as it should be under these circumstances) instead of on one lot as in the past. This suggestion, however, will at once be met by the owners of property in such a community with the inquiry as to what is to become of the owner of the single lot sandwiched in between 2 adjacent lots already improved. The answer to such a query is that no law can be formulated which will not work some slight degree of injustice or apparent hardship and that the welfare of the community in having adequate and ample space for light and air and fire protection and the amenities of civilization between buildings, far outweighs the hardship that may be suffered by the few individual lot owners in that community who may be thus situated. Moreover, it should be pointed out to such individuals that under the law the owner of such a lot can always build his property up to the lot line and by using a different type of house conform to the housing law. That, by either building his house 2 rooms deep, having the rooms secure their light and air from the street or from the back yard, or by utilizing courts he can build a dwelling which, though it may not be arranged in all respects according to the particular type of house that has prevailed in that community in the past, will still be an adequate dwelling and one that people will want to live in and one that will have proper light and air.

NOTE 5: Reference has been made in Note 2 to the desirability of taking advantage of adjacent property conditions and allowing the owner of a new projected dwelling to secure the benefit so far as practicable of his neighbor's light and air. It will not do, however, to be too liberal in this respect. Otherwise, the whole purpose of the law may be defeated. Take the case, for instance, of a man who is building a dwelling on a lot where there are no dwellings already erected on either side of him; and this is quite a common occurrence. He might, unless the law safeguarded this point, build his dwelling right up to the lot line on either side claiming that he was leaving a great deal more space between his building and the nearest adjacent building than the law required, the "nearest

adjacent building" in his case possibly being 100 or 200 feet distant, or even further away. If his building were permitted to be erected in this way, we would soon have, when the adjacent property began to be built up, all of the evils of the present day of "lot line windows," and the building in question would soon have its light shut out by neighboring buildings erected close to the lot line. It will not do of course to permit anything of this kind. Where a man is building and the adjacent property is not built upon, it is reasonable to require him to leave the full amount of space needed between buildings entirely on his own lot, or failing in this to secure a binding agreement on the part of his neighbor to leave a similar space on his property unbuilt upon for purposes of light and air. There will probably be much objection made to filing an easement agreement, the chief objection being made that it is a lot of bother that the average man who builds a house doesn't want to bother with; that it involves a lot of legal red tape; that it clouds the title of the property; that it involves the paying of a lawyer; and especially that it means that one's neighbor will hold him up for compensation of an exorbitant nature before he will sign such an easement agreement. Undoubtedly many of these objections are valid though none of them presents any real difficulty where a person wants to carry out this scheme. The answer to them is that a man cannot have his cake and eat it too. If he wants the very great advantage of leaving vacant on his lot only half the space that he ought to leave to secure adequate space between buildings, he surely ought to pay whatever may be necessary to obtain from his neighbor a similar space and paying a lawyer's fee for such an easement agreement is a very small matter. Where a man building a dwelling is unable to do this he certainly should be required to leave the full space on his own lot.

NOTE 6: The plan as outlined here presents one or two novel features of considerable importance. The ordinary easement agreement where it has been tried for such purposes has been of little legal value, for the reason that it was in its essence only a private contract between two individuals and could be dissolved at any time when those two individuals or their successors in interest so desired. The result of this situation was

that with an easement agreement of this kind filed when the house was built it was possible some 5 or 10 years later for the then owners of the two pieces of property to get together and decide to dissolve it; with the result that one of the pieces of property was torn down and a new building built close to the adjacent building. Thus the whole purpose of the easement agreement was made null and void. In order to obviate this difficulty, it is provided here that the city, town or village through its Corporation Counsel, City Attorney or equivalent officer shall be a party to the easement agreement and that the agreement shall not be dissolved without the city's consent. It is further provided, for the same reason, that a copy of the agreement shall be filed in the office of the Health Officer as part of the plans of the dwelling and shall be indexed by street and number so that any person may readily find it.

NOTE 7: In most cities the side yard is the usual method of treatment in the case of the private dwelling, a type that it is most desirable to encourage. It is the prevailing type of American habitation. The conditions that prevail with regard to the private dwelling differ materially from the conditions that exist in the case of multiple dwellings of various kinds and especially flats and apartment houses, including the so-called two-family dwelling as defined in this act, which is in effect a 2-story flat. In the case of multiple dwellings, we do not have the situation of a man owning his own home built for his own occupancy. Such buildings are built always to rent and the families that live in them have no choice but must take the kind of accommodations that are available for rent in that community. A man can build his own home the way he wants it, as a rule, but a tenant can rent only the kind of apartment that is vacant when he is looking for a place to live in. In addition, the multiple dwelling is generally a business investment and as a rule represents a sufficiently large return on the capital invested to warrant the imposing of adequate standards for light and air. It may be necessary in some instances to compromise with our principles and accept lower standards in the case of private dwellings than we believe to be right, but this is not at all necessary in the case of the multiple dwelling. Moreover, multiple

dwellings, especially the larger apartment houses and flats, are not as a rule built with side yards as the chief feature. Courts are much more commonly used with this type of building, varying from the open street court of the H-shaped apartment house to the outer court and even to the large central inner court or garden that is coming into vogue more and more in recent construction.

For these reasons, it will be noted that a differentiation has been made between the size required for side yards in the case of private dwellings and in the case of multiple dwellings and two-family dwellings, the standards being 2 feet more in the case of the latter than the former.

NOTE 8: The adequacy of the side yard depends upon three factors—its width, the height of the building and its depth or length. The longer or deeper the building, the wider the side yard should be. In some cities where lots of 200 feet depth prevail, it is not uncommon to build apartment houses and flats 4 stories high and 180 feet deep with a side yard from 3 to 4 feet wide. It is obvious that such side yards are grossly inadequate and ought not to be permitted.

For these reasons, a requirement has been included in this section by which as dwellings increase in depth beyond 60 feet, which is taken as the normal maximum depth of a dwelling, the side yard shall increase by 2 feet for every 10 feet of additional length beyond 60 feet. This applies only to the case of two-family dwellings and multiple dwellings; for, no private dwelling is likely to be erected which will exceed or even equal 60 feet in depth. The multiple dwelling can well afford to leave this additional space, and should be made to. It is to be carefully noted that the length of the side yard is measured (see definitions Section 2 (6)) from the front wall of the dwelling to its rear wall and not to the rear lot line.

The way that this would work out in practice can best be appreciated by a concrete example. Take the case of a 3-story apartment house on a lot 100 feet deep with a building 72 feet deep. In that case under the provisions of this section, the side yard would have to be 16 feet wide—12 feet the minimum for a building of this height, with an additional 4 feet of width required because of the additional depth of the building beyond

60 feet. This would mean that where the adjacent buildings were similarly constructed, only 8 feet would have to be left on each side of the flat in question. It is immediately apparent that this is an extremely liberal provision from the point of view of the owner of such property. In the case of a 4-story building similarly situated, the space on each side of the flat would have to be but 9 feet, and in the 5-story building but 10 feet.

In the case of lots of such extreme depth, as for instance, a lot 200 feet with a building of very great depth, say 150 feet, there the side yard for a 3-story building would have to be 30 feet between adjacent buildings or 15 feet on each side of the flat to be erected. This also is quite liberal in view of the great depth of the building.

NOTE 9: It should be noted that the increase in width of court requirement because of greater depth of building applies to the entire width of the court. Without this specific provision the law would be evaded; as ingenious architects have sought to do in several cities by dividing the side yard up into several sections making each section of a certain width instead of increasing the entire width of the side yard by the amount required.

NOTE 10: It will be noted that specific reference has been made to dwellings $1\frac{1}{2}$ stories in height and $2\frac{1}{2}$ stories in height and that these are treated on the same basis with reference to width of side yards as buildings of 2 full stories and 3 full stories, respectively. This is only proper; for, a $1\frac{1}{2}$ -story building might be higher than a 2-story building in actual number of feet in height. While the sloping roof does permit more light and air to enter the side yard, it does not confer enough benefit to offset the need of the greater width of side yard for a building of such height. While the definitions would include such parts of stories and require them to be counted as full stories, this is so important a matter that it has been thought best to state the requirement in such clear language that there can be no misunderstanding about it; for, it has been found in practice that builders and other laymen have not always understood this, with the result that it has given rise to much argument with the enforcing officials, causing them difficulties and

trouble. It is to obviate this that the language employed in this section has been used.

NOTE 11: One of the difficulties encountered in connection with side yards is found in the practice which prevails in many cities, especially where the peaked roof house exists, of having a very heavy "overhang" of the eaves; or, in the case of flat roof houses, having the cornice run all the way around the side yard or well into it. There are many instances where adjacent cornices thus overhanging have completely filled the entire side yard. A side yard under these conditions is of little value; for, all of the sunlight and most of the air is shut off at the roof by cornices which amount almost to a solid wall. The result is darkness, dampness and lack of ventilation and the entire purpose of having a side yard is thus defeated.

For these reasons an absolute limit of 18 inches is set on the amount of projection of cornices and eaves. This would give 3 feet overhang between two adjacent dwellings reducing in the case of a 2-story dwelling the effective space for light and ventilation from 8 feet to 5 feet. It is at once seen from this mere statement how vitally important it is to safeguard this point.

Strong arguments will be presented to permit encroachments upon the side yard space by means of porches and bay windows. This should not be permitted. The minimum widths set down in this section are the minimum and should not be encroached upon. Bay windows are not at all necessary in the side yard, as the principal rooms of the house do not usually open upon that kind of open space but upon the street, or front yard, or rear yard where it is easily feasible to have bay windows. With regard to porches in side yards, the situation is somewhat different. While it is true that ample porch facilities for any dwelling can be obtained at both front and rear, it will be found in a number of cities, especially in the case of two-family houses, that it is desired to have the entrance for one of the families by means of a porch or piazza at one side of the building. This must necessarily extend into the side yard. Having the porch in this location is of course not a necessity as the building can be so planned as to permit entry

to both apartments from the front, but this may involve a change in the habits of the people and it may not be worth while to attempt to overcome the opposition that will be aroused by such a change. If, therefore, it is desired to meet this point of view the following concession is suggested (see also Section 2, Subdivision 16). Add at the end of paragraph (d) the following:

Concession

CONCESSION: "Except that in a private-dwelling or a two-family dwelling hereafter erected one unenclosed outside porch may be located in the side yard, provided such porch does not extend into the side yard a greater distance than SIX feet from the side wall of the building nor exceed TWELVE feet in its other horizontal dimension. The width of the side yard in dwellings hereafter erected"

NOTE 12: The question arises sometimes as to whether these requirements for multiple dwellings should apply to hotels. It will be noted that no exception has been made in this provision in the case of hotels, although the modern hotel as defined in Paragraph 4, Section 2, has been exempted from the rear yard requirements of the law. It may be asked why it is not equally necessary to exempt hotels similarly from the side yard requirement. The reason that such exemption is not necessary is to be found in the fact that the modern hotel (and that is the only type that we are concerned with) is as a rule built on a corner lot and very often on a lot bounded by three streets. It certainly ought not to be built on an interior lot, and for these reasons the side yard treatment is not likely to be employed in connection with a modern hotel. Such a building will get its light and air from the streets and generally in addition from a large inner court and sometimes from a back yard and outer court. One state has handled this situation by adding at the end of the section the following:

"The above requirements for side yards shall not apply to hotels hereafter erected, as defined in Paragraph 4 of Section 2, outside of residential districts."

This would permit great latitude in the case of hotels built in the business sections of cities, the place where they are as a rule located in most cities, but would

require hotels located in residential districts to preserve the amenities of the residential character of the district by having adequate side yards. This scheme is *not* recommended. The writer believes that in most cases it will be found that hotels can with perfect propriety conform to the requirements of this section, as they will not desire to utilize side yards at all. Where, however, a situation exists where it seems wise to make an exception, the scheme above outlined might be advantageously followed.

NOTE 13: One city where the detached type of dwelling was the prevailing type and where the "row house" was almost unknown, was very anxious that their law should prohibit absolutely the building of houses in rows or contiguous to each other. Such a provision would mean that all houses would have to be detached. It would prevent the usual type of semi-detached house. It would prevent the so-called "Philadelphia row" and it would prevent such admirable "group houses" as have been developed at Sawyer Park, Williamsport, Pa., or at Yorkship Village, the U. S. Shipping Board development or in the development of the Economical Homes Co. at Elizabeth, N. J.—to cite but a few of the recent good types of group housing developments of the country. It would also prevent the building of apartment houses and flats in the way in which almost the entire cities of New York and Chicago are built up and would prevent the building of the usual type of dwelling house in the closely built up sections of any city.

This mere statement as to the effect of such a scheme is in itself sufficient to indicate that it is impracticable, even though desirable from some points of view. From the legal point of view it is of very doubtful constitutionality. One doesn't see upon what basis it could be justified or sustained in court. To say that every building shall stand off so many feet from any adjacent building even though there may be no windows in its side walls and those side walls may be of brick, would be hard to justify upon grounds of health, safety or welfare.

NOTE 14: Some states have sought to limit the requirement that side yards shall be a minimum width, to those cases where there are "required windows" in

the side walls. In other words, where a type of dwelling is erected in which all the rooms receive their light and air either from the street or rear yard but have supplementary windows on the side yards, it is suggested that a very narrow side yard be permitted. There is a good deal of plausibility to this suggestion but it is a dangerous practice which ought not to be permitted, for, it will mean inadequate space between buildings, with resultant dampness; and this space, among certain classes of the population at least will become the gathering ground for waste material and refuse of various kinds. There is danger, too, that later on the building in question may be altered, that rooms may be subdivided and new rooms created opening entirely on the side yard which will not furnish adequate light or ventilation. This is a very real danger. For these reasons, it is essential that this section should contain the requirement which it does, "If any space is left it shall conform to the provisions of this section."

NOTE 15: In some cities architects have sought to be permitted to have side yards built over on the ground floor just as they have desired to cover over courts and rear yards on the ground floor, in the case especially of multiple dwellings. This should not be permitted. One of the advantages of the side yard and one of the reasons for according it the liberal treatment which is accorded to it in this law is because of the fact that it enables persons using the dwelling to walk all around it, to have ready access to the rear yard and to have side *yards*. We have not yet in our civilization in America had to resort to the hanging gardens of Babylon and until we do, it would seem desirable to keep yards down on the earth and not up in the sky. It is not at all necessary to permit this excessive use of land and it should not be permitted.

NOTE 16: The declaration of purpose introduced in the first sentence of this section which reads:

"In order to insure adequate light and ventilation and reduce the conflagration hazard and preserve the amenities of residential districts"

is novel though it has been followed in a number of the recently enacted housing laws. The language has not as yet been construed by the courts. The writer

believes that the section is strengthened by this declaration of purpose; for, it enables the supporters of the law when attacked to adduce as reasons for this section not merely the necessity of adequacy of light and air but the importance of reducing the conflagration hazard—something very different from the fire hazard and one which affects the whole community—as well as the important consideration of having civilized and pleasant conditions of living. The writer believes that on the Welfare clause of the Police Power the courts will uphold a requirement of this kind, based upon the necessities of preserving the amenities of residential districts; and that a law based upon the undesirability of having houses built so close together that one bed room is so near to a bed room of an adjacent dwelling that there cannot be proper privacy, will be sustained and supported by our courts.

NOTE 17: If the plan outlined in this section of determining the size of side yards on the basis of space between adjacent buildings does not commend itself in any given case and it is desired to enact a provision on the basis of having the side yard measured to the lot line and not take advantage of conditions on neighboring property, the following ALTERNATIVE SECTION is given for guidance in such a contingency:

§ 24. SIDE YARDS; DISTANCE BETWEEN ADJACENT BUILDINGS.² In order to insure adequate light and ventilation and reduce the conflagration hazard and preserve the amenities of residential districts, no dwelling hereafter erected shall approach nearer at any point to the lot line than as prescribed in this section. The space between such dwelling and the side lot line measured from the side wall of said dwelling shall be deemed a side yard and shall be as follows:

Alternative

(a) In the case of private dwellings hereafter erected one story in height such space shall be not less than THREE feet; for such dwellings one and one half or two stories in height FOUR feet; for such dwellings two and one half or three stories in height FIVE feet and shall increase similarly ONE foot for each additional story or part story.

(b) In the case of two-family dwellings and multiple-dwellings hereafter erected such space shall be proportionate to the height of such dwelling and also to its length or depth, as follows: For such dwellings one story in height such space shall be not less than FOUR feet; for such dwellings one and one half or two stories, FIVE feet; for such dwellings two and one half or three stories, SIX feet; for such dwellings four stories SEVEN feet; and shall increase similarly ONE foot for each additional story or part story. Wherever such dwellings exceed SIXTY feet in length or depth, such side yard space shall be further increased throughout its entire width by ONE foot for every TEN feet or fraction thereof that such length or depth is in excess of SIXTY feet.

(c) All of the above mentioned side yards shall be at every point open from the ground to the sky, except as otherwise provided in paragraph sixteen of section two.

(d) Nothing in this section contained shall be construed as preventing the building of dwellings in rows adjacent to each other with no space between them.

(e) Nor shall anything in this section be construed as preventing the building of single dwellings of all classes right up to the side lot line, provided no room or public hall or other part thereof obtains the light and ventilation required by this act from windows located at such lot line or on any side yard less than the size required by this section.

(f) If any space is left it shall conform to the provisions of this section.

NOTE 18: If this scheme is followed instead of the one suggested, it will be necessary to add to Section 29 the following: After the words "shall conform to the provisions of section twenty-four relating to side yards" strike out the period, insert a comma, and add the following:

"but shall be twice the width therein required."

§ 25. COURTS.¹ The size of all² courts for dwellings hereafter erected shall be proportionate to the height³ of the court, which for purposes of this section shall be measured from the bottom of such court, wherever it starts, to the top of the highest wall abutting it. No court shall be less in any part⁴ than the minimum sizes prescribed in this section. The minimum width of a court throughout its entire height shall never be less than ONE THIRD⁵ of such height. The length of an inner court shall never be less than twice such minimum width.⁶ The length of a court, except in the case of a side yard, shall never be greater than four times its width.⁷ The width of all courts adjoining the lot line shall be measured to the lot line and not to an opposite building.⁸

NOTE 1: The comments in connection with the definitions (Section 2, Sub-division 7) have a special bearing on this section, and should be read in connection therewith. Explanation

NOTE 2: While there is a material difference between outer and inner courts and logically they should be treated in the law on a different basis, the outer court being permitted to be of a less size than the inner court because of the better opportunities for securing light and ventilation, yet in this law all courts have been treated alike. This has been done deliberately with a full realization that it is not "logical." It has been done in order to keep the law as simple as possible. It is especially desirable to keep it simple in this section, as it is very easy to have extremely complicated provisions with reference to open spaces, especially courts, unless one is on one's guard. The difference between this law and the New York City law in this respect is marked. Here it has been possible to embody all the provisions with reference to sizes of courts in 140 words. In the New York law it takes 2,030 words to treat the same topic, the provisions comprising some six closely printed pages of small type. The result is a complicated provision which the ordinary layman has difficulty in understanding.

NOTE 3: The plan adopted for regulating the size of courts as set forth in this section marks a radical departure from the methods employed in earlier housing laws. In all previous enactments a fixed minimum width in feet has been established with a similar fixed increase for increased height of the dwelling—generally of one foot for each story of increased height. The objections to this method of regulation are that it is more or less arbitrary, that it does not follow any definite principle—it represents at best only the results of observation and experience as to what sized court will produce in practice a sufficient amount of light for a building of a given height. It also has the disadvantage of regulating the width of court by the height of the building in stories which is a very variable quantity. A three-story dwelling for instance may be 30 feet high or may be 40 feet high. It is obvious that the same width of court is not adequate under such different conditions.

Similarly, most earlier laws fail to make allowance for the fact that in hotels and apartment houses, the courts very often do not extend down to the cellar or even to the ground level but stop sometimes at the second or third tier of beams. In such cases it is a hardship on the investor to require a court which is only 4 stories in height to be of a width that is necessary for one 6 stories in height, due to the fact that the *dwelling* is 6 stories high but the court itself only 4 stories. As worded here, the height of the court is measured “from the bottom of such court, *wherever it starts*, to the top of the highest wall abutting it,” thus also providing for the shutting off of light by parapet walls.

NOTE 4: The phrase “less in any part” is an important one. The irreducible minimum is the irreducible minimum. If a court 10 feet wide is the least sized court which will give adequate light and ventilation it is obviously unwise to permit any open space which is left for the purposes of light and ventilation to be of a less size. Architects, because of greater convenience in planning, will want to use all sorts of little recesses and extensions of a smaller size and different dimensions from those laid down in the law. This should not be permitted, as it will result in dark, damp, unventilated and unsanitary

shafts such as have prevailed in many of our larger cities to the great detriment of the occupants of the house. The following diagram shows some of these types of extensions and offsets, which are illegal unless they are made of adequate width when they may then be permitted.

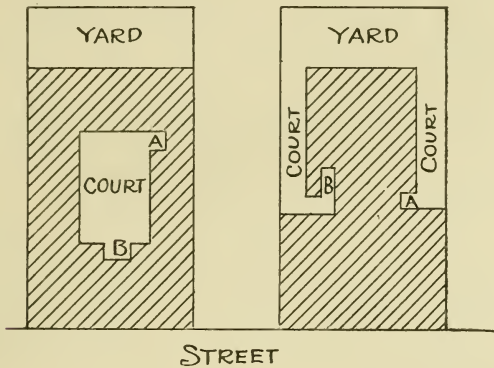


FIGURE 15

NOTE 5: The standard established here that the width shall be not less than ONE THIRD the height of the court, it is believed, will prove to be a very practical standard. Theoretically, on the same principle that the width of the street on which a dwelling abuts should be equal to the height of the dwelling in order to admit sufficient light, the width of a court should similarly be equal to its height—or possibly even greater. To advocate such a scheme, as a matter of compulsory law, would, undoubtedly in the minds of many people justify the epithet of “idealistic” or “impractical.” It is, however, what the Federal Government has declared to be desirable in its “Standards for Permanent Construction” adopted March 7, 1918, and which were laid down and followed in the industrial housing projects carried out by the U. S. Dept. of Labor and the U. S. Shipping Board and for which 200 million dollars was appropriated by Congress.

In these standards will be found the following requirements for dwellings:

“Open Spaces. Rear yard depth not to be less

than height of building, nor in any case less than 20 feet. *Minimum distance between backs of houses should be 50 feet.*"

The requirements of the Model Law for "Courts" apply almost entirely to multiple dwellings, especially apartment houses, flats, tenements and hotels. The court treatment is practically unknown with the private dwelling and two-family dwelling—the usual method of development with these two types being the side yard.

It is enlightening, therefore, to contrast the standards laid down in the Model Law with the Standards of the Federal Government just referred to. In discussing this type of multiple dwelling the Federal Standards have this to say: (Type 8)

"Buildings are not to be more than 2 rooms deep. This means either that rooms shall open on a street or on a rear yard, or *on an interior park sufficiently large for grass and trees to grow in it* and of a sufficient size to admit direct sun *shine* into all rooms opening on it, at some period of the day, except rooms with northerly exposure."

Compared with these, the Standards of the Model Housing Law for Courts with a width equal to only one-third of their height are most liberal—and far removed from "idealistic." Yet even these low standards will be opposed by some architects and builders and representatives of other special interests who are opposed to housing laws that in any way restrict them.

How liberal these standards are to the builder of apartments and tenement houses is shown by the following table:

COURTS

HEIGHT OF BUILDING	MINIMUM Width OF COURT	MINIMUM LENGTH OF Inner COURT	MAXIMUM LENGTH OF Outer COURT
1-story (10 ft.)	3½ ft.	6½ ft.	13½ ft.
2-story (20 ft.)	6½ ft.	13½ ft.	26½ ft.
3-story (30 ft.)	10 ft.	20 ft.	40 ft.
4-story (40 ft.)	13½ ft.	26½ ft.	53½ ft.
5-story (50 ft.)	16½ ft.	33½ ft.	66½ ft.
6-story (60 ft.)	20 ft.	40 ft.	80 ft.
and so on.			

It is seen from a study of this table that a person building a 3-story apartment house or flat, and utiliz-

ing courts of various kinds would have to have his courts a minimum width of 10 feet. If he used an inner court it would have to be 10 by 20 feet; and if he used an outer court it would have to be 10 feet wide and could be any length he desired up to 40 feet; beyond that point it would have to increase in width proportionately.

Applying these standards to the extreme case of a sky-scraper hotel, 150 feet in height, it is evident that the courts would have to be 50 feet wide. While this may seem a great deal of open space to leave, it is not any too much to secure adequate light and ventilation in a building of such great height. It is significant that this is the amount that the Federal Government Standards require to be left for private dwellings *only 2½ stories high*.

If the requirement that the width of the court shall be not less than ONE THIRD of its height seems too high a standard in any given community, and ONE FOURTH seems too little and not adequate, it is suggested that the ratio be expressed by decimals, as for example three tenths.

It should be noted that the minimum width equal to one third of the height of the court applies throughout not only the entire width of the court, but also throughout *its entire height*. So that it will not be possible, as some ingenious architects may urge, to so construe the law as to permit the erection of a three story apartment house with an inner court but 3½ feet wide for the top 10 feet of height or upper story; 6⅔ feet wide at the second story, and 10 feet wide at the lowest story. The court must be 10 feet wide throughout.

NOTE 6: The requirement that "the length of an inner court shall never be less than twice the minimum width prescribed by this section" is frequently not understood without analysis, especially in view of the requirement which immediately follows it and which seems to be a contradiction of it. Both requirements are accurately expressed and mean what they say. The requirement above quoted is made necessary to insure an inner court of adequate size. Instead of attempting to fix arbitrarily the length of an inner court a scientific principle has been evolved by which the second horizontal dimension of an inner

court shall always be equal to twice the minimum width prescribed in the law. Thus an inner court, which the law requires to be 10 feet wide, may not be less than 20 feet in length. The reason for this is that without this requirement neither sufficient light nor proper ventilation can be assured in this type of court where all the light and air that come in must come in over the top of the court. It should be noted that this provision does not require the length of the court to be twice the width, but merely twice the *minimum* prescribed by the law. They are very different things. To illustrate: In the case of a three-story dwelling the law requires a court to be 10 feet wide. It is conceivable that an owner might prefer to have his court 12 feet wide; in other words, build better than the law requires. It would be obviously unfair in such case to penalize him and require him to have his court 24 feet long (twice its width), whereas his neighbor might build an inner court 10 feet wide and 20 feet long and have it entirely legal.

NOTE 7: A similar misunderstanding exists with regard to the provision "The length of a court, except in the case of a side yard, shall never be greater than four times its width." This seems to be a direct contradiction of the previous provision and to a person not familiar with the conditions, unreasonable. Courts become objectionable when they are long and narrow. The sunlight which streams in at the end or over the roof will not under such circumstances reach all portions of the court. The further away a room is from the outer end of a court the less desirable it becomes. It is for the purpose of preventing the use of narrow courts of undue length that this provision has been formulated. It furnishes an automatic means of regulating this evil.

NOTE 8: The requirement that the width of the court shall be measured to the lot line and not to an opposite building, while not legally necessary in view of the definition of a court as contained in Sub-division 7 of Section 2, is here stated in the way that it is stated in order to make this subject so plain that no one can either misunderstand it or present arguments to the enforcing officials to be permitted to light or ventilate any portion of their dwelling from the adjoining premises. This puts an end to the evils of "borrowed

light." In this connection see the discussion under Section 2, Sub-division 6, Note 1.

NOTE 9: Sometimes permission is desired to leave on the premises on which the dwelling is to be erected passageways of a smaller width than the minimum dimensions laid down in the law for yards or courts; claim being made that such spaces are additional to those required by law and that therefore it ought not to be necessary to make them so large, inasmuch as the rooms and other parts of the building all open directly upon courts of legal size and that if any windows open on these narrower spaces they will be supplementary to the windows required by law. This is plausible but it is dangerous to permit it. Such spaces create unsanitary conditions. They are bound to result in dampness and invariably become gathering places for waste material; if supplementary windows open upon them it is likely that ultimately when it is proposed to alter the dwelling additional rooms will be created which will get their sole light and ventilation from these spaces. The only safe course of procedure is to require all open spaces to be of an adequate size.

§ 26. COURTS OPEN AT TOP. No court of a dwelling hereafter erected shall be covered¹ by a roof or skylight. Every such court shall be at every point open from the ground to the sky unobstructed.² Except that in the case of hotels hereafter erected, as defined in paragraph four of section two, courts may start at the floor level of the lowest bed-room story. No court under any circumstances shall extend down so as to be less in size in any part than the minimum sizes prescribed in section twenty-five.³

NOTE 1: It is obvious that a court which is relied upon to furnish ventilation will be worthless if covered over at the top with a skylight or glass awning, and yet this kind of court was in use considerably some years ago and is still used in some European cities. It is, however, antiquated and should not be permitted. A court should be open to the sky. Little enough air will be provided at the best. Nothing that obstructs it should be tolerated. The requirement that the court shall not be obstructed pro-

Explana-
tion

hibits the placing of fire-escape or other balconies in courts, thus encroaching upon the minimum space permitted.

NOTE 2: In connection with the discussion of Yards (Note 4, Section 22), the desire of certain interests to build over portions of the yard and courts on the ground floor and the propriety of this under certain limitations have been fully discussed. If it is determined to be wise to permit this and to adopt Concession 1 suggested in connection with Section 22, then the following similar concession should be adopted for Section 26. After the words "lowest bedroom story," end of the section, add the following:

Concession

CONCESSION: "and in the case of other multiple-dwellings where there are stores or shops on the entrance story, courts may start at the top of such entrance story."

Explanation

NOTE 3: It should be observed that this permits in the case of hotels the building over of the courts on all the stories below the first bedroom story; that is, stories in which the public rooms of the hotel are located, but this permission does not in any way include the right to have rooms on such stories which do not have windows opening directly to the outer air; here the provisions of Section 31 will govern.

Similarly in the case of apartment houses and other multiple dwellings where there are stores or shops on the entrance story, the courts may start at the top of such entrance story. It should be carefully noted that in both of these cases the entire court must go down to the bottom, wherever that bottom is located. It will not be possible, for instance, to stop a portion of the court in the case of a hotel at the third story and then extend down the rest of the court to the first story, unless the court is at such point the minimum dimensions prescribed in Section 25. In other words, there is no prohibition against stopping a portion of the court at the third story and extending the rest down for two more stories to the ground floor, provided the court for those two lower stories is the full size that is required as a minimum in Section 25. To do this, however, would mean that the court above the third story would have to be of a larger size than

the minimum required by the law. Figures 16 and 17 illustrate this. Figure 16 shows what is not permitted with the court extended down less than the

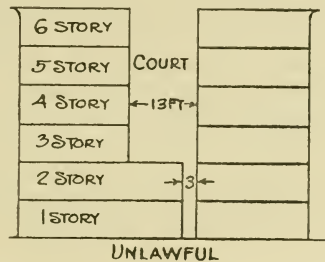


FIGURE 16

A COURT CARRIED DOWN UNLAWFULLY

minimum size. Figure 17 shows what is permitted with the court extended down the legal size. Both diagrams are "sections through."

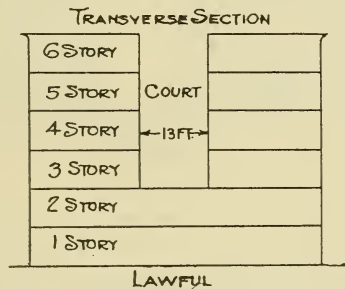


FIGURE 17

A LAWFUL COURT

§ 27. AIR-INTAKES.¹ In all dwellings hereafter erected every inner court shall be provided with two² or more horizontal air-intakes at the bottom.³ One such intake shall always communicate directly with the street or front yard and one with the rear yard, and each shall consist of a passageway⁴ not less than three feet wide and seven feet high which shall be left open, or be provided with an open gate at each end.

Explanation

NOTE 1: The purpose of this requirement is to provide a means of renewing the air in inner courts. Air currents are generally horizontal; without these intakes or tunnels the air in an inner court is pretty sure to be stagnant most of the time except at the top story. With this provision, however, excellent ventilation is furnished; that is, as good ventilation as can be obtained through the use of courts. This system has been in vogue for some years in several cities and has given great satisfaction. A strong current of air is generally to be found circulating through the court. It is, of course, essential that the tunnel should always be kept open and that the occupants of the house should

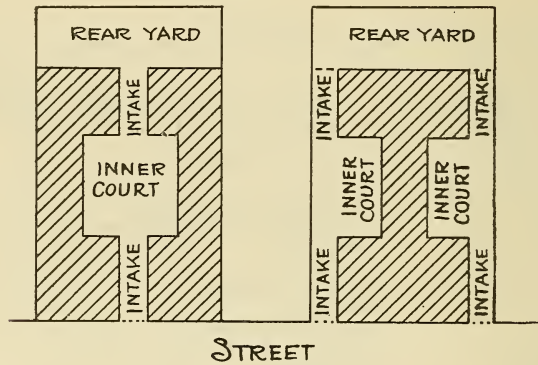


FIGURE 18
INTAKES

not be allowed to obstruct the free passage of air by using the tunnels as storage places or by closing them up at the ends with solid doors, both of which experiences have been had in cities where the intake is used. The tunnels are not expensive; generally one of the side walls of the building acts as one of the walls of the tunnel, and all that it is necessary to build is the opposite wall, which can be a partition. It is better to build it substantially in order to minimize the fire danger. The tunnels are also an excellent means of exit from the yard to the street in case of fire and in the case of apartment houses afford a convenient delivery entrance for tradesmen. The above diagram illustrates the arrangement of the intake.

NOTE 2: Certain interests will seek to omit the intake entirely or to limit the requirement for an intake to inner courts "which extend through more than one story" or even "through more than two stories." To permit such methods of construction is a serious mistake. *No inner court should be permitted without an intake.* If, unwisely it is permitted, then the whole scheme for treating inner and outer courts on the same basis will have to be revised, and inner courts will have to be twice the minimum width laid down in Section 25.

In some cities there will be a good deal of opposition to this requirement with reference to the intake leading to the street, especially where it is desired to use the ground floor of the building for stores or shops. In such cases objection will be made to giving up the space necessary for the intake, on the ground that it will interfere with the proper size and shape of store desired. This is true. Objection will also be made to taking the intake through the cellar in such cases, because of the extra expense involved in carrying the court down to the cellar level and the necessity of providing an areaway and grating at the front of the building. If it is desired to meet these objections, the best way is to require but one intake. In such case the following concession is suggested. Substitute the following:

CONCESSION: "§ 27. AIR-INTAKES. In all dwellings hereafter erected every inner court shall be provided with one or more horizontal air-intakes at the bottom. One such intake shall always communicate directly with the street or front yard or rear yard and shall consist of a passageway not less than three feet wide and seven feet high which shall be left open, or be provided with an open gate at each end." **Concession**

NOTE 3: It should be noted that the law is silent as to whether the intake or tunnel should be begun at the level of the entrance story or at the cellar or even at the second story. This is deliberate and great latitude in this regard is given to the owner. The requirements of the law are satisfied and the purposes of the section are secured if the tunnel is left at the

bottom of the court, wherever that bottom may happen to be. If the court extends down to the ground, as is contemplated by this law, then the tunnel would start either at the ground level or in the cellar.

NOTE 4: Permission may be asked to use a metal duct instead of the open passageway. This should not be granted as experience shows such ducts to be unsatisfactory. They do not allow sufficient movement of the air, as they often run with turns and angles in them. Cats crawl into them and commit nuisances, and they become generally objectionable. The tunnel is the only thing that is adequate.

§ 28. ANGLES IN COURTS. Nothing contained in the foregoing sections concerning courts shall be construed as preventing the cutting off of the corners¹ of said courts, provided that the running length of the wall across the angle of such corner does not exceed seven feet.²

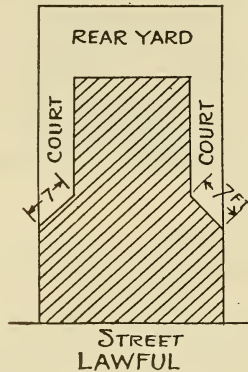


FIGURE 19

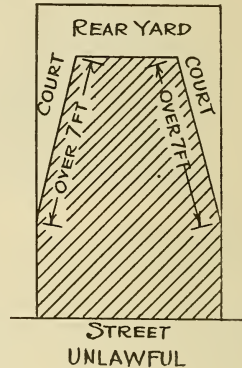


FIGURE 20

Explana-
tion

NOTE 1: The purpose of this section is to permit the cutting off of the corner of a court so as to secure a window at an angle, thus obtaining better light, as illustrated in Figure 19.

NOTE 2: The limitation of 7 feet in length of the portion of the wall thus set at an angle is necessary as otherwise evasion of the requirement establishing the minimum width of the court will be possible; ingenious architects will be quick to seize this loophole

and plan a court as shown in Figure 20, so as to make the wall running at an angle practically coincide with the entire length of the court, thus materially reducing the width desired.

§ 29. BUILDINGS ON SAME LOT WITH A DWELLING.¹ If any building is hereafter placed on the same lot with a dwelling there shall always be maintained between the said buildings an open unoccupied space extending upwards from the ground and extending across the entire width of the lot. If such buildings are placed at the side of each other the space between them² shall conform to the provisions of section twenty-four relating to side yards. If such buildings are placed one at the rear of the other, the space between them shall be the same as that prescribed in sections twenty-two and twenty-three for rear yards. In all cases the height of the highest building on the lot shall regulate the dimensions. No building^{3,4} of any kind shall be hereafter placed upon the same lot with a dwelling so as to decrease the minimum size of courts or yards as hereinbefore prescribed, except one-story private garages or stables as provided in the next section. If any dwelling is hereafter erected upon any lot upon which there is already another building, it shall comply with the provisions of this act, and in addition the space between the said building and the said dwelling shall be of such size and arranged in such manner as is prescribed in this section, the height of the highest building on the lot to regulate the dimensions.

NOTE 1: This section deals with the evils of lot overcrowding, caused by the erection of many buildings upon the same lot. In some cities where deep lots prevail as many as three or four separate buildings are sometimes found upon the same lot. In some cases all these separate buildings are used for dwelling purposes, often as tenements. The evils of the rear tenement have been so often rehearsed that they need not be repeated here. It is obvious that if several buildings are to be placed on the same lot the relation of each building to the other must be carefully considered and nothing must be permitted that would

Explana-
tion

jeopardize the maintenance of proper open spaces for all of the buildings. From an ideal point of view many people would wish to prohibit by law the erection of a building upon the rear of a lot upon which there is a dwelling in front, but reflection shows that this is not feasible. Where lots are deep and a system of alleys prevails the owner must necessarily have more than one building on his lot if he is to utilize his land to its full commercial development. Moreover, any appropriate scheme for the treatment of alleys and their elimination as sources of evil must contemplate the erection of dwellings fronting upon the alley. When we come to the consideration of private dwellings it is at once apparent that the owners of high-class private dwellings must be permitted to have garages, private stables, and similar buildings at the rear of their lot. This is the best place for them.

NOTE 2: It appears, therefore, that several buildings on the same lot are an inherent necessity in many cases. The important thing is to see that they are not constructed so as to become an evil. This section automatically prevents this by requiring in all such cases that the open space between buildings shall be of sufficient size. This is accomplished by applying to such open spaces the same requirements as are imposed for rear yards when one building is at the rear of the other; and for side yards when the buildings are at the side of each other. This is obviously the only way to treat the subject; the presence or absence of a real or imaginary lot line should make no difference in the space required to furnish adequate light and ventilation.

NOTE 3: In the earlier laws an attempt was made under this section to prohibit on the same lot with a dwelling "any building other than a dwelling." This was intended to stop the building of a factory on the rear of the lot where there was a dwelling on the front.

A number of difficulties at once presented themselves. It was found in practice that such a provision did a great deal more than was contemplated or desired. The first great difficulty encountered was the garage. Such a provision prevented either a private garage or private stable at the rear of a private dwelling. This was obviously an impossible situation. It also prevented the building of a little workshop at the

rear of the lot where a man interested in carpentry might employ himself as a means of recreation; it also prevented children's playhouses, some types of summer houses or outdoor studios and so on.

It would also have prevented a very common change in occupancy which takes place in many neighborhoods, viz., the alteration of a dwelling on the front of the lot for store purposes, and the use of a dwelling on the rear for residence purposes.

For all of these reasons, it seems best not to attempt to regulate these conditions through a Housing Law, but to leave their control to Zoning Regulations which will necessarily go into questions of Use of property in great detail and with reference to the peculiar conditions which exist in different parts of a city.

NOTE 4: Some cities and states have thought it wise to legislate against rear dwellings so as to prevent the chief evil of such structures, viz., their being shut away from public observation without outlook on the street and often without access except through a front building. If this evil seems likely to develop in any community, the following Variation is suggested. Add at the end of this section the following:

VARIATION 1: "No dwelling shall hereafter be so erected or placed on a lot that it shall be left without at least one side thereof having a proper and adequate frontage upon the street on which the lot fronts. Nor shall any building other than a dwelling be placed upon the same lot with a dwelling so as to interfere with such adequate and proper street frontage of said dwelling."

Variation

NOTE 5: There are a number of considerations to be observed in connection with this subject. In the first place, it will not do to prohibit outright the erection of dwellings at the rear of the lot. If a man wants to set back his dwelling and leave a very large front yard, he certainly has a right to do so and ought to be free to do so.

It will not do either to require, as some cities have, that a dwelling so placed "shall have at least one side thereof with an *unobstructed* frontage upon the street."

Such a provision would prevent buildings located as shown in the diagram on the next page.

That is, one building at the rear of the other with 50 feet between the two (a more than adequate space) but the rear dwelling for 5 feet of its length behind the front building. In such a case the rear dwelling would not have an "*unobstructed* frontage upon the street."

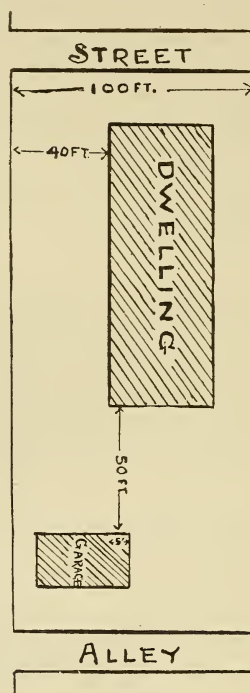


FIGURE 21

Another point to bear in mind is in relation to alley dwellings. In some cities it may be necessary to permit dwellings fronting on alleys and without any other street frontage. In such case the provisions of Variation 1 would prove embarrassing. The situation could be met, however, by adding at the end of the Variation the following:

Variation

VARIATION 2: "The provisions of this requirement for street frontage shall not apply to dwellings having an entrance and frontage upon a public alley."

NOTE 6: It should be noted that Variation 1 deliberately refers to "adequate frontage upon the *street on which the lot fronts.*" As under the provisions of Paragraph 21 of Section 2 (definitions) a public alley 16-feet wide is a "street", it becomes necessary in this case to refer to "the street on which the lot fronts."

It should also be noted that this Variation provides not only for the case of new dwellings erected at the rear of the lot, but also for cases "where some building other than a dwelling is placed on the same lot with a dwelling." An important consideration that must not be lost sight of is that this requirement (Variation 1) would prohibit a dwelling for the chauffeur over the private garage at the rear, unless the garage were so located as to "have one side with a proper and adequate frontage upon the street."

A garage with chauffeur's quarters in it located as in the following diagram would not be possible.

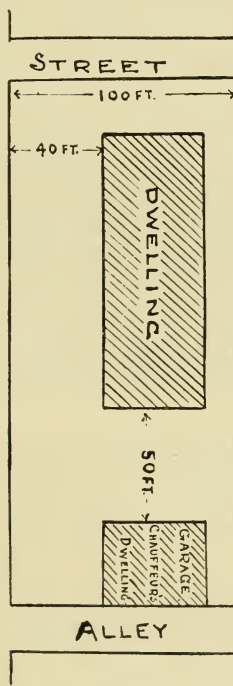


FIGURE 22

NOTE 7: Difficulties sometimes arise with regard to the treatment of corner lots where it is desired to place one building fronting on one street, which of course will be directly behind the building fronting on the other street. This is inherently the same situation as two adjoining buildings on different lots with side yards between them, and the open space between the buildings should be treated as side yards and regulated in that way. This is done at once, automatically, if the owner, for purposes of the law and the record, divides his lot and treats it as two lots. Then each building has relation to its own particular lot. This is an option which most owners will gladly seize, as it will impose upon them less onerous requirements than would be imposed if the open spaces required by Section 29 were made to apply to this class of cases.

§ 30. PRIVATE GARAGES AND PRIVATE STABLES.¹ A private garage or private stable may be built at the rear of a lot on which there is a dwelling at the front. In the case of private garages which do not exceed one story in height, the depth of the rear yard shall be measured to the middle line of the alley or to the rear lot line, as the case may be, as provided in section twenty-two, and such garage or stable if not over one story high may approach within ten feet of the rear wall of the dwelling or may be attached as an extension to the dwelling provided it does not obstruct light or ventilation in any way. In the case of garages over one² story high and in all other cases the rear yard shall be measured from the rear wall of the dwelling to the nearest wall of the building at the rear of the lot.

No public garage or public stable may be erected on the same lot with a dwelling. No private garage or private stable on the same lot with a dwelling shall exceed two² stories in height. It may have living rooms therein for the use solely of the chauffeur or coachman or member of his family. If so occupied, the garage or stable in addition to complying with the provisions of this act shall have an entrance from outside of the building without passing through the garage or stable.

NOTE 1: The almost universal use of the automobile—among workingmen as well as among other classes—brings important changes in property subdivision and in the use of property. It is no longer safe to plan an Industrial Housing Development that does not provide a garage, or a place for one, with each workingman's dwelling. Up-to-date housing laws consequently, must give this matter careful consideration.

For these reasons, the above provisions have been formulated. They have been framed, as will be noted, with great liberality. They allow *one story private* garages to approach within 10 feet of the rear wall of the dwelling and allow *such* garages to occupy the space required to be left open as rear yard space in Section 23. To illustrate: Let us take the case of a 3-story dwelling on a lot 100 feet deep. Let us assume the owner desires to set back his house 25 feet from the front line; under the provisions of Section 23 he would have to leave a rear yard of 20% of 75 feet (the depth of lot less the set-back) or 15 feet. This, however, can be measured to the middle line of his 16-foot alley. He would have to leave therefore a rear yard of only 7 feet on his lot. He could accordingly have a garage 20 feet deep at the rear of the lot—leave a 10-foot rear yard between it and the house, and have a dwelling 45 feet deep. While this seems at first to be an inadequate back yard, it is not so in reality. For, the rear rooms of the dwelling will open upon an open space of 46 feet (10-foot back yard, plus over the top of the 20-foot one-story garage, plus 16-foot alley) and in all probability of 76 feet if his neighbor at the rear develops his property in a similar way.

NOTE 2: Obviously, these privileges should not be granted to garages over one story high; for, buildings higher than that at the rear of the lot would unduly interfere with adequate light and ventilation of the dwelling on the front.

There are a few cases, however, where a person of means will want to have living accommodations over the garage for his chauffeur and for the chauffeur's family. This ought to be possible. It is accordingly provided for. In such a case, however, the required back yard cannot be measured to the middle line of

the alley but must be left between the two buildings. In the case cited under Note 1, the only difference that there would be if the garage were a 2-story one, would be that the space between the rear of the dwelling and the garage would have to be 15 feet instead of 10 feet. It is apparent that this also is most liberal treatment.

§ 31. ROOMS, LIGHTING AND VENTILATION OF.¹ In every dwelling hereafter erected every² room³ shall have at least one window, and preferably two windows,⁴ opening directly upon the street, or upon a yard or court of the dimensions specified in this article and located on the same lot, and such window shall be so located⁵ as to properly light all portions of such rooms. Ample provision for through or cross-ventilation⁶ so as to insure free movement of the air shall be provided in each room by means of transoms, doors, or windows. The provisions of this section shall not, however, apply to rooms used as art galleries,² swimming pools, gymnasiums, squash courts or for similar purposes, provided such rooms are adequately lighted and ventilated by ventilating skylights in the roof thereof.

Explana-
tion

NOTE 1: This section taken with the sections regulating the size of open spaces is the keystone of the arch of the law. It is obvious that we should permit no dark rooms to be built in future dwellings. Especial note should be taken of the phrase that the open space is to be of the dimensions specified in this article and also that it is to be located on the same lot.

NOTE 2: No room in which people live, not merely one in which they sleep, should be dependent for its sole light and ventilation upon a ventilating skylight. Human beings need more than light and air. They must have outlook. Rooms of the type described are little better than prison cells, and yet notwithstanding these considerations architects will be found who wish to construct rooms of this type for servants. It should not be permitted. In the case of private dwellings there are types of rooms such as have been enumerated in the last sentence of this section; namely, art galleries, swimming pools, squash courts, etc., where the requirement for a window might in-

terfere with the primary purpose of the room. This would certainly be the case with art galleries. It will do no harm, therefore, to permit roof lighting and ventilation in lieu of windows in such cases.

NOTE 3: The question will be raised as to whether this provision applies to pantries and clothes closets. Neither of these is a room, and the law is not intended to require windows in clothes closets. They would be objectionable there. A window in a butler's pantry is very desirable but it is not always practicable to provide it and such a provision in the law would materially complicate the planning in many cases. It is not advisable, however, to put into this section a specific exception stating that windows are *not* required in butler's pantries and clothes closets, as it might have the effect of suggesting to some of the unscrupulous architects who plan multiple dwellings a method of evading the requirements with regard to lighting of rooms by marking the rooms "closets" and "pantries" for purposes of getting the plans passed and then after the dwelling is erected, building dark bedrooms. It can safely be left to the enforcing officials to distinguish between the *bona fide* pantry or clothes closet and the "fake" one.

NOTE 4: This is a new advance. No housing laws heretofore enacted have required more than one window in a room. In most cases it is just as easy to provide two windows as one. They are very much needed for both light and ventilation. While the law as worded does not outlaw a plan with only one window in a room, it "suggests" two. This will enable the enforcing officials to require two windows in cases where it is feasible.

NOTE 5: The requirement that the windows "shall be so located as to properly light all portions of such rooms" has been found necessary in some cities, especially in the case of multiple dwellings where a room is located with a window at the extreme corner of it opening on some court with the result that there are portions of the room which are too far removed from the light and are dim and shadowy. This requirement enables the enforcing officials to refuse to approve the plans where such conditions exist. (See Figure 23, next page.)

NOTE 6: This also is a new advance. In recent

years the science of ventilation has undergone radical and revolutionary changes. As a result of careful scientific study and experimentation we have come to learn that "cubic air content" is of relatively little

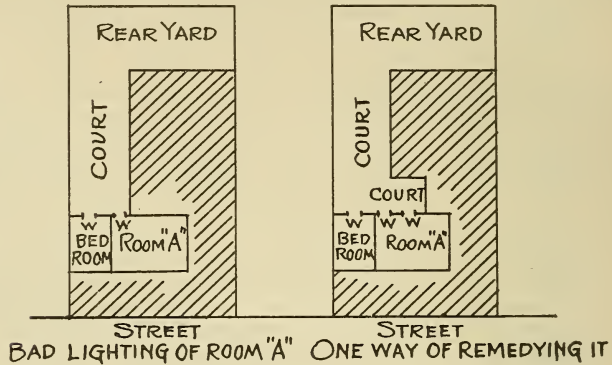


FIGURE 23

moment, and that the important things are the reduction of high temperature, the avoidance of too much moisture and especially *free movement* of the air. The opportunity for "through" or cross-ventilation, therefore, becomes of vital consequence. It is remarkable the difference a transom over a bed room door will make in the livableness of the room. The best way to secure "through" ventilation of course is to have windows in opposite or adjacent sides of a room. This, however, is not always possible, especially in the case of multiple dwellings. Where this is not possible, very good results are obtained by providing communicating doors between adjacent rooms, when such doors are strategically located.

NOTE 7: It should be noted that the provisions of this section will fully safeguard conditions where it is permitted to cover over yards or courts, or a portion of them, on the ground floor. Nothing in such permission would give the right to construct rooms on the ground floor which do not have windows opening on an open space of lawful size.

NOTE 8: In some cities where owing to high land values the necessity for concentrated housing exists, types of multiple dwellings have been evolved in

which there are on each floor one or several so-called "interior apartments," which have all their rooms opening either on a court or on the side yard. It is believed by some that it is bad for people to live in such homes, without outlook on either street or rear yard. Certainly such apartments cannot have as adequate ventilation as those on the street or yard. If it is desired to prohibit these inside flats, the following variation is suggested. Add at the end the following:

VARIATION: "In multiple-dwellings of Class A hereafter erected there shall be no apartment, suite or group of rooms which does not contain at least one room opening directly upon the street or rear yard." Variation

§ 32. WINDOWS IN ROOMS.¹ In every dwelling hereafter erected the total window area in each room² shall be at least ONE SEVENTH of the superficial floor area of the room, and the whole window shall be made so as to open in all its parts.³ Such window area shall be of windows opening directly upon the street, or upon a yard or court of the dimensions specified in this article. At least one such window shall be not less than twelve square feet⁴ in area between the stop-beads. In multiple-dwellings hereafter erected the top of at least one window shall be not less than seven feet six inches above the floor.

NOTE 1: This is an attempt to assure sufficient light and ventilation in all rooms. It will operate only in the case of very large rooms or where an attempt might be made to evade the law by constructing a long room and later subdividing it. In this event more ample window space should be provided. It will be seen at a glance that there is nothing in this section that can be deemed a hardship by anyone. In the case of a bed room of 90 square feet the window would have to be a little over 12 square feet in area, which is about the usual size. That would give a window 2½ feet wide and 5 feet high. Explan-
ation

NOTE 2: The provisions of this section are not intended to apply to bath rooms and water-closet compartments. That subject is treated under Section 37.

NOTE 3: The phrase "in all its parts" means that the whole window shall open. If the window is a "double-hung" sash, both halves must open fully. If the window is a casement window or hinged sash, the whole window will naturally open. Similarly, if it is a pivoted sash.

NOTE 4: The establishing of 12 square feet as a standard does not mean that a room cannot have windows less in size than this but that there must be at least one window of that size in a room. This would permit such further ornamental treatment as may be desired with oval or fan-shaped windows or windows of irregular size, for architectural effect.

§ 33. ROOMS, SIZE OF.¹ In every dwelling hereafter erected all rooms, except water-closet compartments and bath rooms, shall be of the following minimum sizes: Every room shall contain at least NINETY square feet of floor area; no room shall be in any part less than SEVEN feet wide.² Except that kitchenettes³ and cells⁴ of jails may contain but fifty square feet of floor area, and be not less than five feet wide. In multiple-dwellings of Class A in each apartment, group or suite of rooms there shall be at least one room containing not less than ONE HUNDRED AND FIFTY square feet of floor area.⁵

Explan-
ation

NOTE 1: Just as it has been found necessary to regulate the minimum dimensions of open spaces to furnish light and ventilation, so it has been found equally necessary to establish the minimum dimensions of rooms, as it has happened that unscrupulous speculative builders, especially in the case of tenement houses, and in many cities also in the case of apartment houses, have built rooms extremely small in order to pack people in as closely as possible and thus increase profits. The tendency has been especially manifest in the case of servants' rooms in high-class apartment houses, the theory having apparently been that servants are not human. The standard of 90 square feet as the irreducible minimum for all rooms, whether bed rooms or any other kind, seems reasonable. Outside of such cities as New York no objection should be raised to this standard. In fact, it will be found that most dwellings that have been erected in

recent years have rooms considerably larger than this. There will be one or two individuals, however, who think this standard too high. It is misleading to consider this question without a full realization of what a room 90 square feet in area is like to *live* in, because in many multiple dwellings the individual bedrooms are really the living rooms of the persons who sleep in them. It is especially so in tenements where as a rule more than one person sleeps in each bedroom—sometimes several people. A room 90 square feet will seem a pretty good sized room on a plan, but the room assumes less desirability when considered, as it must be, with the various articles of furniture in it which are usually found there. Even a room 90 square feet in area after a clothes closet or wardrobe has been built into it, thus taking 6 square feet of the



FIGURE 24
ROOM WITH FURNITURE IN IT

floor area away, seems less commodious when a double bed, a bureau, a wash-stand, a chair, a small table, and a trunk are placed in the room.

NOTE 2: It would seem that it should be unnecessary to impose a minimum width of room, but experience in several cities has shown that many architects and builders have been willing to build rooms of the most outrageous type—rooms that look more like long corridors or sleeping-car effects than like living rooms. These have been chiefly in tenement houses or servants' rooms in apartment houses. In order to prevent this it has become necessary to establish a minimum beyond which they shall not go. Seven feet is little enough.

NOTE 3: The "kitchenette" apartment house is not a desirable type of dwelling to encourage. From a social and civic point of view it is bad for a community

to have many buildings of this type; for, it makes it too easy for young married people to avoid the responsibilities of family life, and thus indirectly discourages having children. Such buildings are quite unsuitable for families in which there are children.

The type fills, however, a legitimate need in the case of single women and men and older people whose families have grown up. A few such buildings do no harm but they should be discouraged as a general type of development. In order to permit the kind of "light housekeeping" that is a feature of buildings of this class, it is necessary to permit in them "kitchenettes" of small size. Fifty square feet with a minimum width of five feet is quite as small as should be

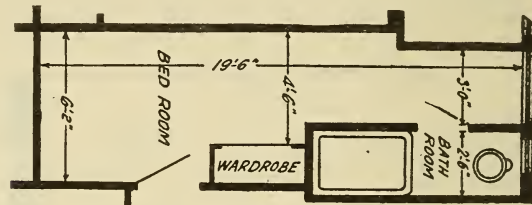


FIGURE 25
NARROW SERVANT'S-ROOM

permitted, and as small as any legitimate interests will desire.

NOTE 4: While it is desirable to afford prisoners confined in institutions all the essentials of life, and especially adequate light and air, it is obvious that it is neither necessary nor desirable to require cells in future penal institutions to be 90 square feet in area. This would add unduly to the cost of such institutions and is quite unnecessary for *one-man* cells.

NOTE 5: The requirement that in the case of apartment houses, flats and tenement houses there shall be in each apartment one room containing 150 square feet of floor area is for the purpose of insuring one living room of a reasonable size to permit proper family life. The law does not attempt to say which room this shall be. That is left to the architect and owner. The room may be the parlor or again it may be the dining room or kitchen. In the case of tenements it is of course obvious that it is unreasonable to require

each flat to have either parlor or dining room. The ordinary tenement has neither. It is all the more important, therefore, in that class of buildings to have the kitchen or living room a reasonable size.

§ 34. ROOMS, HEIGHT OF. No room in a private-dwelling or two-family dwelling hereafter erected shall be in any part less than EIGHT¹ feet high from the finished floor to the finished ceiling. Except that an attic² room in such private-dwelling or two-family dwelling need be but EIGHT feet high in but one half its area, but at no point less than SIX feet in height; where, however, such attic room contains a floor area of one hundred square feet or more³ it shall be not less than SEVEN FEET SIX INCHES high in one half its area, and at no point less than FIVE feet in height. No room in a multiple-dwelling⁴ hereafter erected shall be in any part less than nine feet high from the finished floor to the finished ceiling.

NOTE 1: With the increased cost of building which has become so serious a factor in creating a housing shortage throughout the country, especially since the War, it has become increasingly important to reduce the cost of the workingman's dwelling in every way practicable, without unduly sacrificing essential requirements of safety or sanitation.

Explan-
ation

No simpler or more effective way of doing this exists than by reducing the cubage of the building; and the easiest way of doing this is by reducing height. Moreover, the fashion of building in many parts of the country—a consideration which cannot wisely be ignored—is for buildings of lower height. For these reasons it seems wise to permit private dwellings and two-family dwellings to be built with rooms only 8 feet high. This, however, is the *irreducible minimum*. The rooms would be more livable and healthier; for, they will be cooler in summer and will have more and better air and the air will move more freely, if the rooms are higher—either 8 feet 6 inches or 9 feet in height. In tropical countries the high ceiling is essential. Where a ceiling of such height can be obtained without going counter to the well-established practice of a community or without arousing too great opposition from

builders and building interests, it is wise to follow the higher standard. Some architects will seek even lower standards than those in this section and will want to be allowed to build rooms even as low as 7 feet and 7 feet 6 inches in height. This ought not to be permitted under any circumstances. Eight feet is the *irreducible minimum*.

NOTE 2: The question will arise as to attic rooms and in many communities it will be strongly desired to permit the erection and use of attic rooms which have not the required height. Attic rooms are seriously objectionable and entirely unnecessary in multiple dwellings of any kind. They certainly need not be permitted in such buildings. When it comes to private dwellings however, the case is different. Unless all private dwellings are to be flat-roofed buildings the attic room becomes a necessity. If not permitted the peaked and gabled roof types of buildings would disappear. As the majority of private-dwellings throughout the country are of this type, any housing law that claims to be practical must take this consideration into account.

All that we need to do is to make sure that no attic room of undesirable type shall be built. That means that we must insure an adequate height throughout the living portions of the room to insure proper ventilation and reasonable comfort in use. The room must not be so low in any part which is to be used, that people cannot move freely around in it without bumping their heads, nor must the bed be set up close under the eaves so that the head of it is too close to or touches the ceiling or rafters. A sufficient supply of air cannot be afforded the sleeper under such conditions.

These conditions are obviated by the requirement that an attic room shall not be less than 6 feet in height *at any point*.

NOTE 3: Where, as often happens, an attic room is made much larger than the minimum sizes laid down in the Model Law, so that practically a room of the minimum size is provided of the full height required by the law, it is apparent that it is only reasonable to allow what may be termed the additional room space voluntarily left to be of a less height. There are limits, however, to which this privilege may wisely be extended. It has been sought in this section to safeguard

these conditions while at the same time granting every privilege which should be granted.

NOTE 4: There is no legitimate reason for rooms of low height in multiple dwellings. In tenements especially, high rooms are essential. In many of these occupied by the more ignorant alien groups, where *habits* of keeping windows open have not yet been acquired, and where as a rule many people occupy a very limited space, and where the practice of taking in lodgers or roomers so often prevails, rooms with a greater ceiling height are an absolute necessity. In other classes of multiple dwellings, apartment houses, hotels, etc., rooms 9 feet in height will be found to be very advantageous. The necessity for reducing cost by reducing the total height of the building is not so controlling here; for, there is a sufficient margin of profit not to make this reduction in cost a matter of much moment. As a matter of fact, all hotels and most apartment houses would have 9-foot ceilings or higher ones, were there no law on the subject.

§ 35. ALCOVES AND ALCOVE ROOMS.¹ In a dwelling hereafter erected an alcove in any room shall be separately lighted and ventilated² as provided for rooms in the foregoing sections. Such alcove shall be not less than NINETY square feet in area.³ No part of any room in a dwelling hereafter erected shall be enclosed or subdivided⁴ at any time, wholly or in part, by a curtain, portiere, fixed or movable partition or other contrivance or device, unless such part of the room so enclosed or subdivided shall contain a separate window as herein required and shall have a floor area of not less than NINETY square feet.

NOTE 1: This is a vitally important section. Unless enacted as drawn, all of the provisions of the law which seek to secure adequate light and ventilation in rooms will go for naught because windowless rooms without light or outside ventilation will be constructed in large numbers in the guise of "alcoves." The history of the experience of various cities on this point is instructive. In New York in 1901, in the desire to meet the views of architects building high-grade apartment houses, an attempt was made to permit alcoves and a provision was formulated by the then

Explan-
ation

Tenement House Commission seeking to do this and at the same time to safeguard the situation against the evils of dark rooms. It was provided that "where any room adjoins another room and has 80 per centum or more of one entire side open to another room and there is no door between, it shall be considered as part of the said room. Under other circumstances every alcove shall be deemed a separate room for all purposes within the meaning of this act."

Immediately the speculative builders building cheap tenement houses took advantage of this provision to break down the requirements prohibiting dark and unventilated rooms. Plans were filed for new tenement houses showing one room in an apartment with windows opening directly to the outer air and then as many as three alcoves opening from each of the other three sides of it; each alcove complying strictly with this provision, having more than 80 per centum open to the outer room. The alcoves so constructed were to be used as bedrooms, adjoining the one light room. Thus at one step, the most serious evils of the type of tenement built forty years before were returned to. The law under such circumstances was manifestly impossible. It was at once amended at the earliest opportunity, but not before a few of these objectionable tenement houses had been built. The amended provision was more simple. It said "alcove rooms must conform to all the requirements of other rooms." Even this amendment, which was thought to be clear-cut, definite and comprehensive did not turn out to be judge-proof! It would have seemed that under the terms of this provision it should not have been possible to evade the law and construct dark rooms in new tenements in the guise of "alcoves," but it was attempted; the public authorities at once brought legal proceedings to restrain it, and then a Supreme Court judge handed down a decision in which he sustained the attempt at evasion, the chief ground of this decision being that an "alcove" was a different thing from an "alcove room" and that the law did not deal with alcoves but with alcove rooms. Nothing short, therefore, of the concise, definite, categorical, and comprehensive language used in Section 35 is adequate to deal with this question. Where

similar provisions have been enacted it has not been found possible to find loopholes in them.

NOTE 2: The great objection to an alcove is that it is bound to be used as a separate room no matter to what extent it may adjoin another room nor how great an opening there is between them to permit light and air to enter. At best the room is sure to be too far away from the source of light and air and is sure to be shut off from the other room, if not by partitions then by curtains or portieres. This type of construction is in some respects worse than if a solid partition had been erected with nothing but a door in it and a totally dark room constructed, as the curtains or portieres are germ catchers and in the ordinary flat are seldom removed or cleaned. A permanent partition does not have these objectionable qualities. The chief objection, however, to this plan of construction is that it is sure to result in people sleeping or living in rooms that do not have adequate light and ventilation.

NOTE 3: It should be carefully observed that nothing in this section prohibits the alcove treatment of rooms, which is often desired because of architectural effect. The architect is still free to utilize such treatment but with the important proviso that the alcove must have its own independent source of ventilation to the outer air and must not be less in size than the minimum size prescribed for rooms; namely, 90 square feet. This is no hardship as long as an architect knows in advance what he can do and what he cannot do and can adapt his plans accordingly.

NOTE 4: That the fear of alcoves being improperly used and dark rooms being created is not a fanciful one, is shown by the experience of the city of Brooklyn during one of the periods alluded to in Note 1, when for a year or more the builders in that city constructed what were known as "wardrobe flats." Their scheme to beat the law was simple and ingenious. A builder would file a plan showing a flat two rooms in depth, each room 11 feet wide by about 30 feet long. One room would be marked "parlor" and the other "kitchen." In view of the wording of the law at that time, the public authorities were forced to accept these plans—though they had their suspicions as to what was contemplated—as each one of the rooms

complied with the law, having windows to the outer air, one opening on the street, the other on the rear yard. What happened, however, was this: After the buildings were finished a wardrobe extending from

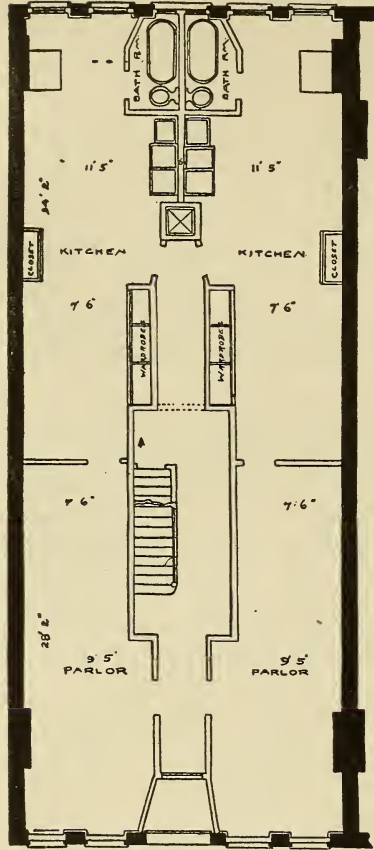


FIGURE 26

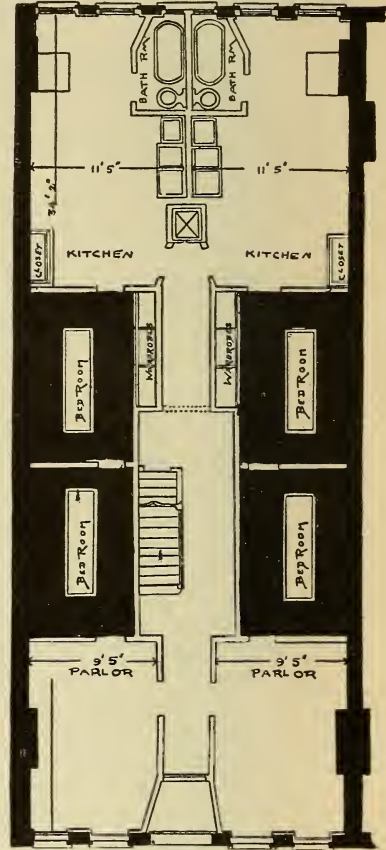


FIGURE 27

"WARDROBE FLATS"

the floor to the ceiling was erected half way down each of the rooms, in the rear room serving as the kitchen dresser and in the front room serving as a general clothes closet; these wardrobes extended entirely across the room in a direction parallel to the front and

rear walls of the building, leaving the usual space for a passage way, practically a door opening, at one side. By this simple device the builder had created four rooms out of two and had two dark bedrooms in each flat. Fifty per cent of all the rooms were windowless and without either light or air, thus returning to the worst type of house that had been erected in that city and which had been outlawed some thirty years back. The houses were rented as "wardrobe flats." The tenants of course did not know what had happened. Finding the flats for rent and seeing a certificate from the city department that the buildings complied with the law, as they did before these wardrobes were erected, they rented the apartments. So skilful did the builders become in this device that they even went one step further and hinged these wardrobes so that when the city inspector should come to inspect the apartment the wardrobes would be swung back against the kitchen or parlor wall as the case might be and thus be held to be a piece of movable furniture and not a permanent partition. The drawings on page 144 show clearly what was done. Figure 26 shows the plan as filed and approved. Figure 27 shows the changes that were made by the installation of the wardrobes.

NOTE 5: Care should of course be taken in enforcing this section, that it should not be done in a technical way, resulting in absurdities. Small recesses in rooms which are solely for architectural treatment, shallow in depth and not extending back from the wall more than a few inches, sometimes for the purpose of placing a piano, should of course be permitted. Common sense must be used in the enforcement of this section as well as in the whole law. The test is whether these slight recesses are susceptible of treatment as a separate room. If so, they should not be permitted. If the recess is very slight and cannot be used for a bed or couch or in any other way as a separate room it can do no harm to permit it. This is not a question that can be dealt with in the statute. It must be left to the intelligent interpretation of the law by the enforcing officials.

§ 36. PRIVACY.¹ In every dwelling hereafter erected, access to every living room and to every bedroom and to

at least one water-closet compartment shall be had without passing through a bedroom. "Passing through a bedroom" shall not, however, be construed as applying to access from a bedroom to an adjoining private bath room or communicating bath room.²

Explana-
tion

NOTE 1: This does not mean that there must be a private hall provided for each apartment in multiple dwellings. It means that the rooms shall be so arranged that access to the bedrooms and to at least one water-closet compartment shall be either through the kitchen, parlor, library, dining room, or private hall if there is one. Nor does it mean that where there are several bath rooms and water-closet compartments access to every one of these shall be had without passing through a bedroom, but that there shall be at least one water-closet to which access may thus be had. This provision is made especially necessary in the case of tenement houses, because of the practice of tenants taking lodgers and boarders into their apartments.

NOTE 2: This provision does not mean that a bedroom cannot adjoin a water-closet or bath room and have direct access to it. It simply means that people not utilizing that bedroom shall not have to pass through it to get to the water-closet. The following sketch shows what is meant. Access from bedroom No. 1 to the water-closet is lawful. Access from bedroom No. 2 through bedroom No. 1 is unlawful.

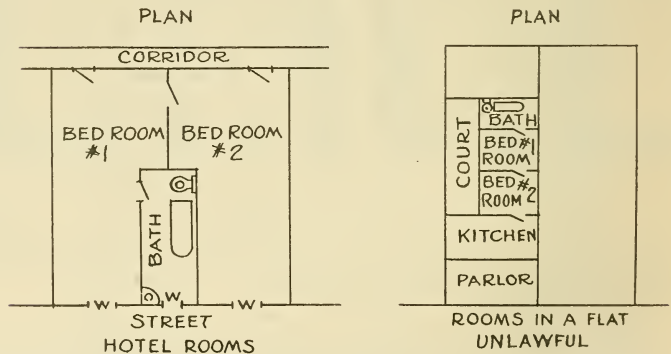


FIGURE 28

§ 37. WATER-CLOSET COMPARTMENTS AND BATH ROOMS, LIGHTING AND VENTILATION¹ OF. In every dwelling hereafter erected every water-closet compartment and bath room³ shall have at least one window opening directly² upon the street, or upon a yard or court of the dimensions specified in this article and located on the same lot. No such window shall be less in size than THREE⁴ square feet between stop-heads, and the aggregate area of windows for each water-closet compartment shall be not less than SIX square feet between stop-heads. Every such window shall be made so as to open in all its parts and shall be so located as to properly light the room in every part. Nothing in this section contained shall be construed so as to prohibit a general toilet room⁵ containing several water-closet compartments separated from each other by dwarf partitions, provided such toilet room is adequately lighted and ventilated to the outer air as above provided, and that such water-closets are supplemental to the water-closet accommodations required by the provisions of section forty-seven. If located immediately beneath a roof, a ventilating skylight⁶ open to the sky with an opening not less than six square feet in area in each water-closet compartment may be used in lieu of the windows above required.

NOTE 1: This is an important phase of house planning concerning which many of our American architects need to be educated. Many of them apparently do not realize the vital importance of light and especially the germicidal effect of direct sunlight in water-closets, particularly in the homes of the poor. The importance of direct sunlight in water-closet compartments in all classes of buildings cannot be overstated. In tenement houses and single-family houses in which poor people dwell the greatest abuses are generally found in the dark water-closet. Conditions here are as a rule indescribable. It is because of this that most sanitary authorities have for years prohibited cellar water-closets. Even in the home of the educated and well-to-do person direct sunlight is essential in the water-closet and bathroom. If there is

Explana-
tion

sickness in the family here is the danger of contagion, especially in cases of tuberculosis, typhoid fever, and so on, as the slop emptyings will take place in the bath room.

NOTE 2: Equally important is the ventilation of such rooms directly to the outer air. Apparently few architects as yet know of the recent discoveries with regard to the principles of ventilation, which have completely reversed much that had previously been held on this subject. The average architect, it would seem, has not heard of the two vital principles necessary to insure proper health; namely, the prevention of excessive temperature and constant movement of the air. The best means of renewing the air is by a window. The only satisfactory method of securing movement of air is also by windows. No artificial system of ventilation that has been devised is equally satisfactory even when well installed and carefully managed and supervised. So far as tenement houses, flats and apartment houses are concerned, the building community has apparently become accustomed to the requirement that water-closets in such buildings shall have direct means of ventilation to the outer air, but even here there are architects who would wish to construct water-closets entirely without such means, relying upon artificial light and artificial systems of ventilation. It will not do, however, to permit any such sanitary standards to be adopted.

NOTE 3: This subject assumes especial significance in the case of the modern high-class hotel, in which practically every bedroom is provided with its private bathroom. A saving of space will undoubtedly result and the building can be planned with much greater ease and will present fewer problems to the architect if he can construct his bathrooms away from the outer walls and without direct ventilation. As the result of such saving of space more rooms can be provided and larger profits secured for the investor. The question is, therefore, in such buildings an important economic one. But the disadvantages of such a method of construction from a sanitary point of view far outweigh the commercial advantages. What determines the decision in this matter is not whether the investor can secure increased profits by this method of construc-

tion but whether the prohibition of the objectionable method of construction will have the effect of making it impossible to construct a building of this kind and have it commercially profitable. No one claims this nor could such claim be effectively sustained. There have been too many modern hotels of the very highest class erected in recent years in our largest cities where each bedroom has its own private bathroom and where every bathroom has direct outside ventilation to make any such claim tenable for a moment. From a sanitary point of view it is especially important that bathrooms and water-closets in hotels should have direct outside ventilation. The hotel from the point of view of spreading disease is far more dangerous than any other class of building because of its transient occupancy. A guest occupies a room; the landlord does not know that the guest is suffering from tuberculosis; he may be careless with his sputum and deposit it on the floor of the bathroom. If the bath room is an "inside" room, there is no opportunity for the sunlight or air to get at the germs and kill them. Similarly with every communicable disease. The inside bathroom is objectionable from another point of view, in that it means excessive heat and no movement of air; that is, it presents the two methods of bad ventilation which are considered by present-day experts as representing the worst forms of the problem. No matter what system of artificial ventilation is provided, there is no adequate means of frequent renewal of the air nor any means of reducing excessive heat, owing to the steam vapor that arises from the hot water supply when a hot bath is drawn. The room is apt to hold for a long time an excessive amount of moisture and high temperature, all of which have a debilitating and injurious effect upon the system. In winter if the steam pipes run through such an inside bath room it is practically impossible to cool it and it becomes extremely uncomfortable for the occupant of the room who is compelled to use it. For all these reasons there should be no hesitation whatever in opposing any plea for permission to construct inside bath rooms or water-closets in future hotels. Architects and owners of projected hotels will be most insistent in demanding the privilege of using "inside" bath rooms, claiming that artificial ventilation is

adequate and pointing to the very general practice of constructing hotels in this manner in most of our cities.

While it is true that many modern hotels have been constructed in this way, it is because there are larger profits to be had thereby. The method has until recently not been prohibited because no one has given any attention to the subject; nor, have housing laws until very recently applied to hotels, and architects have accordingly been free to do as they pleased.

One of the chief objections to any artificial system of ventilation is that, no matter how well it is planned, its success is dependent upon the degree of faithfulness with which the fans are operated. The almost universal experience is to find the hotel management stopping the fans, in order to save power, coal and money.

A ventilating system which doesn't ventilate is not of much use. And no artificial system *will* ventilate, if the fans aren't kept running. We know of no device of legislation that will secure this result. Whenever an artificial system is installed, one is dependent on the good faith of the management to keep it running. For, it would take an army of inspectors to enforce such a requirement.

Even where an artificial system of ventilation ventilates, it cannot provide either light or sunshine in the bath room. And both are essential.

If, in the face of all that has been said as to the undesirableness of "inside" bath rooms in hotels, it is desired as a matter of expediency to permit them, the following Concession is suggested. Add at the close of the section the following:

Concession

CONCESSION: "The above provisions shall not apply to hotels hereafter erected, as defined in paragraph four of section two, which have a system of forced ventilation so constructed and operated as to entirely change the air in every bath room and water-closet compartment once in every seven minutes."

No such concession should for a moment be considered for anything but the modern high-class hotel. Some architects may want to adopt the same system in high-class apartment houses. This should not be

tolerated. No city in America permits this, or has permitted it for 20 years or more. Even New York with its excessive land occupation, its high land values, and its host of sky-scrapers has never permitted it. There, even in apartment houses 150 feet high, where every bed room has its private bath room, bath rooms have to be "outside," or on the outer wall of the building. If this can be successfully required in New York, it is surely a standard that can be easily maintained in all other cities of America.

NOTE 4: It should be noted that the minimum area of window space required is 6 square feet. The practice heretofore has been to construct windows of bath rooms and water-closet compartments too small. Such small windows do not afford sufficient light or ventilation. There is no difficulty at all in constructing larger windows. It is simply a case of following the custom. From an architectural point of view the appearance of the front of the building is greatly improved by having the bath room windows correspond to the other windows of the dwelling in size and arrangement. This is easily possible as bath rooms are always of sufficient width to permit it. The extra cost is but slight, as windows are generally as cheap as wall. This section does not permit any window less than 3 square feet. It requires 6 square feet of window surface in the bathroom or water-closet. The required window area may be in one window or in two.

NOTE 5: In hotels and similar multiple dwellings it is quite common to have general toilet rooms on the ground floor, or in the basement or cellar, or on some of the upper stories for the use of guests and the public.

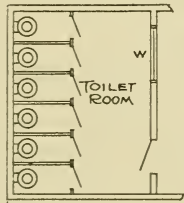


FIGURE 29

Unless special provision were made in this section, as is done in this sentence, it would not be possible

to have these general toilet rooms, as each water-closet compartment would have to be provided with a separate window. This is not necessary where a general toilet room is adequately lighted and ventilated to the outer air and where the individual toilet compartments are separated by dwarf partitions. This exception as to the method of lighting and ventilating water-closet compartments in no way affects the requirement that in certain kinds of multiple dwellings, namely, tenement houses, flats, and apartment houses, each family shall have its own private water-closet located within the apartment. This is governed by the provisions of Section 47.

NOTE 6: It frequently happens, especially in the case of hotels, that it is desired to locate a group of water-closets at the bottom of a court which is covered over on the ground floor in this way and using as a roof to the water-closet compartment a ventilating skylight. Such a method of construction will provide adequate light and ventilation and should be permitted.

§ 38. PUBLIC HALLS.¹ In every dwelling hereafter erected every public hall shall have at each story at least one window opening directly upon the street or upon a yard or court of the dimensions specified in this article and located on the same lot. Such window shall be at the end³ of said hall with the natural direction² of the light parallel to the hall's axis. Any part of a public hall which is offset or recessed⁴ or shut off from any other part of said hall shall be deemed a separate hall within the meaning of this section and shall be separately lighted and ventilated.

Explan-
ation

NOTE 1: The evils of dark public halls, especially in tenement houses, can hardly be overstated. Darkness and dirt usually go hand in hand. This is especially true of the public parts of a building used in common by many individuals and with the responsibility for their care divided among several people. Where the light streams in, conditions of filth are seldom found as people are ashamed of such conditions when they are visible to themselves and to others. From the point of view of danger from the spread of communicable disease, light public halls are

equally necessary. The germs of tuberculosis cannot live in strong sunlight more than a few moments, but have singular persistency in damp or dark places and live for a long time. From the point of view of public morals, dark public halls are equally objectionable. To them are directly traceable in numerous instances cases of grave immorality. Being open to the street as they are in the ordinary tenement house, they are entered by tramps and other irresponsible persons and all sorts of nuisances are frequently committed.

NOTE 2: The phrase "natural direction of the light" may seem puzzling at first. In the case of light coming from an inner court there is no natural direction of the light, as all the light comes over the roof. In the case of an outer court, however, the natural direction of the light is a line parallel to the axis of the court; that is, at right angles to the open end of the court.

NOTE 3: This provision will be held to be drastic by architects who are planning hotels, as the effect of it is to require a window at the end of the public hall so that the light and air may stream through all its parts, instead of permitting a window at one side. The reason for this is that the light that is thus received will light only a short part of the hall, nor will such a window permit free movement of the air. What is desired is light that will light every portion of the hall, and ventilation which will permit the air to blow through the hall and blow out all foul odors and completely renew the air. This is especially necessary in hotels where the public halls, as a rule, receive the foul air from the numerous bedrooms opening upon them. Owing to the transient nature of the occupancy of hotel rooms and the increased danger of the transmission of communicable disease, the public hall becomes a special danger-point in buildings of this class. Heretofore the usual type of public hall in the high-class hotel has been one that is quite dark, depending chiefly on electric light for its light and on artificial ventilation for its air. Such halls are as a rule stuffy and filled with odors. Recently hotel proprietors have begun to see the unwisdom of this type of construction and are providing better lighting and ventilation. The diagram on the next page shows the method of lighting and ventilating public halls made

compulsory by this section (Figure 30), while Figure 31 illustrates the method of side lighting which is frequently employed and which is forbidden by this section.

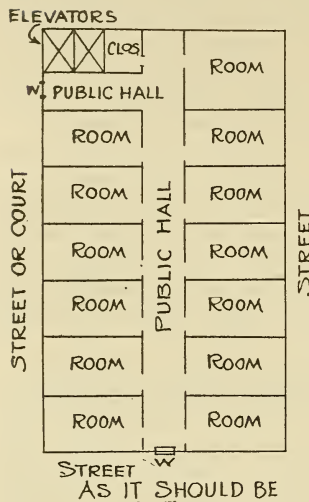


FIGURE 30

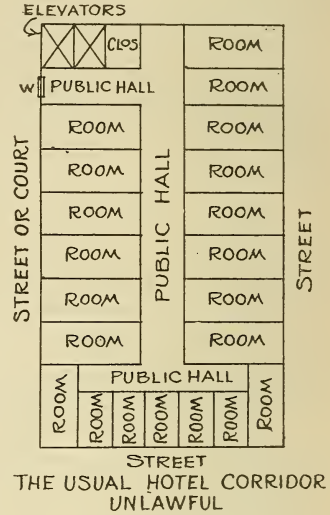


FIGURE 31

NOTE 4: Particular objection, especially in the case of hotels, will be made to the last sentence of this section which requires any portion of a public hall running at an offset from the main hall to be treated as a separate hall and to be separately lighted and ventilated. In the case of hotels this involves a sacrifice of floor space, as is at once seen by reference to the diagrams. Figure 31 shows the ordinary type of public hall frequently found in the modern high-class hotel. It will be seen that even where the main hall is properly lighted and ventilated by a window at the end, there are what may be termed side corridors giving access to numerous rooms which run in a direction at right angles to the main corridor and which have no means of light and ventilation other than artificial ones. It is definitely intended by this section to make this type of construction impossible in the future.

It will at once be seen that this involves a material

sacrifice of floor space, yet if we are to have really proper ventilation and lighting of public halls in hotels nothing else can be permitted.

These considerations will not be found to apply to the same extent in other classes of buildings; in the case of both apartment houses and tenement houses, the plan will naturally be so arranged as to do away with long public halls because of the waste of space involved in such arrangement. In private dwellings and two-family houses there will be no public halls; the halls will be private halls and this section will therefore not apply to them.

If it is desired to make concessions to the persons interested in building hotels the following modification can be employed, although any change in this respect is advised against. Add at the end of the section the following:

CONCESSION 1: "This section shall not apply to hotels hereafter erected, as defined in paragraph four of section two, provided the public halls are lighted by electric light and ventilated adequately by a system of forced ventilation." **Concession**

NOTE 5: If it is not desired to go as far as this, but to require some ventilation to the outer air and yet obviate the disadvantages of loss of rentable floor space resulting from the requirement that the window shall be at the *end* of the hall, the following Concession will undoubtedly be approved by those opposing the requirement as originally written. If it is desired to make similar concessions in the case of high-class apartment houses, this Concession 2 will be found most adapted to that purpose.

CONCESSION 2: "In the case of hotels hereafter erected, as defined in paragraph four of section two, in lieu of the requirement for one window at the end of each hall, there may be windows located at the side of such hall, provided there shall be at least one such window in every twenty feet in length or fraction thereof of said hall; and each such window shall open directly upon the street or upon a yard or court of the dimensions specified in this article and located on the same lot." **Concession**

§ 39. WINDOWS AND SKYLIGHTS FOR PUBLIC HALLS. In every multiple-dwelling¹ hereafter erected one² at least of the windows provided to light each³ public hall or part thereof, located as required by section thirty-eight, shall be at least TWELVE square feet in area measured between stop-beads. In every multiple-dwelling hereafter erected there shall be in the roof directly over each stairwell, a ventilating skylight⁴ provided with ridge ventilators having a minimum opening of FORTY square inches, or such skylight shall be provided with fixed or movable louvres.⁵

Explana-
tion

NOTE 1: It should be observed that this provision for ventilating skylights applies only to *public* halls. It also does not apply in the case of private dwellings and two-family dwellings.

NOTE 2: This provision does not prevent any number of windows of a less size than the size prescribed if it is desired to have round, oval, or other shaped windows for architectural effect. All that it requires is that there shall be at least one window of the required size in each public hall.

NOTE 3: This limitation as to minimum size applies to each public hall; that is, to the hall at every story.

NOTE 4: It may be thought by some that if a public hallway is thus adequately provided with windows, a ventilating skylight in the roof is unnecessary. This view is erroneous. A ventilating skylight is needed in addition to the window ventilation for two reasons. First, in tenement houses and also in many flats, apartment houses, and even in hotels, hall windows will not always be left open with sufficient frequency to renew the air. The ventilating skylight insures always a certain amount of ventilation and the carrying off of the vitiated air. Second, the ventilating skylight is an important element in case of fire as it will allow the smoke and flames to be vented at the roof and will thus have a tendency to prevent the fire from "mushrooming" out on each floor and spreading laterally into the apartments and rooms.

NOTE 5: It will not do to require the louvres in the skylight to be fixed because in the case of a steam-heated hall this would mean the loss of all the heat. The law gives the owner the option of using either fixed or movable louvres. The louvre is a slat sim-

ilar to those often seen in a church belfry. The amount of opening of 40 square inches provided in the ridge ventilator will be found to be very small and will not in any way interfere with the plan of maintaining steam-heated halls where that is desired, and yet this amount of opening will insure a certain amount of continuous and permanent ventilation of the hall.

§ 40. WINDOWS FOR STAIR HALLS, SIZE OF.¹ In every multiple-dwelling hereafter erected there shall be provided for² each story at least one³ window to light and ventilate each stair hall which shall be at least TWELVE square feet in area, measured between the stop-beads and shall open on the open spaces required by section thirty-eight. A sash door,⁴ opening on similar open spaces, shall be deemed the equivalent of a window in this and the two foregoing sections, provided that such door contains the amount of glazed surface prescribed for such windows.

NOTE 1: This provision applies to stair halls and is intended to secure separate and adequate means of lighting all stair halls irrespective of the means of lighting and ventilation provided for the public halls. The same considerations which apply to the maintenance of light conditions in public halls apply equally to stair halls with the additional fact that a light stair hall is essential if the stairs are to be used as a means of egress in case of fire. Explan-
ation

NOTE 2: It should be noted that this requirement does not necessitate the window of the stair hall being *at* or on each story, but there must be one such window *for* each story; that is, the window may be on the stair landing, half way between the two stories throwing its light both up and down the stairs. This is an excellent type of construction and should be permitted.

NOTE 3: This provision does not interfere with the use of small oval, round or other irregular-shaped windows that may be desired for architectural treatment. All that it requires is that at least one window for each story shall be of the minimum size provided.

NOTE 4: It is often desired to use a French window treatment for architectural effect, also to use sash doors. Both of these forms of construction should be

permitted provided the adequate amount of lighting and ventilation can be secured.

NOTE 5: If it is desired to make concessions to hotels as outlined in Section 38, then the following Concession should be added here to the end of this section.

Concession

CONCESSION: "This section shall not apply to hotels hereafter erected, as defined in paragraph four of section two, provided the stair halls are lighted by electric light and ventilated adequately by a system of forced ventilation, and that such lighting is maintained both day and night."

§ 41. OUTSIDE PORCHES.¹ In dwellings hereafter erected outside porches shall not be so located or constructed as to interfere with or diminish the light or ventilation required by this act. The term "outside porches" shall include outside platforms, balconies and stairways. All such outside porches shall be considered as part of the building and not as part of the yards or courts or other unoccupied area.²

Explanation

NOTE 1: In a number of cities the outside porch has become more or less of a fixed habit. Such porches on the ground floor at the front or rear of a private dwelling are as a rule unobjectionable. Although they do to some extent darken the rooms from which they open, there are in such houses as a rule other windows for the rooms in question additional to those required by law. It will of course not do to prohibit outside porches. When extended up in the air, however, the outside porch becomes a serious evil. This, unfortunately, has become a firmly established type of construction in a number of cities, both in the case of two-family dwellings and also in tenements and flats. It is a common feature of the "three-decker," which is usually provided with a system of outside wooden balconies connected with wooden stairs at the rear of the building. The type is objectionable from a number of points of view. In the first place, the wooden balconies frequently extend so far from the rear wall of the building that they greatly darken the living rooms opening upon them, thus

creating one or more dark or dim rooms on each floor. They are also very unsightly as they become a sort of "lumber room" and have stored on them the numerous articles that accumulate in a household. Here may be seen refrigerators, rocking horses, step-ladders, pails, baskets, boxes, and so forth. Being of wood and connected with wooden stairs and containing these accumulations of inflammable material, they are a distinct source of danger in case of fire. In parts of the country where the weather is severe in the winter, the outside porches are frequently enclosed with glass and wooden partitions throughout five months of the year and in some cities are kept enclosed practically throughout the year. The result is that the rooms from which they open, which were erected as outside rooms and intended to have direct sunlight and fresh air, are deprived of both.

The one advantage claimed for this type of construction is that it enables people to sleep out of doors and to live out of doors more than they otherwise would. This is to some extent true. Careful observation, however, does not bear out the contention that these balconies are used to any great extent as sleeping porches nor do the members of the household use them much for living purposes in the day time except in the hottest summer months.

It is obvious that there is little use in setting down in the law with minute care the sizes of open spaces upon which rooms may open and the minimum dimensions of the rooms themselves in order to furnish proper light and ventilation to the people living in them, if at the same time it is possible to render nugatory all of these effects by the erection on the outside of the building of what is practically another room, shutting off light and air and thus turning outside rooms into inside rooms with neither proper light nor ventilation.

It should be observed that this section does not prohibit the use of outside porches or stairs, but does require that they shall not interfere with the lighting and ventilation of rooms and halls.

NOTE 2: If Concession 1 noted in Subdivision 16 of Section 2 is made, the following Concession should be made here. In the last sentence after the word "porches" insert a comma and add the following:

Concession

CONCESSION: "except as otherwise provided in subdivision sixteen of section two,"

WALL-BEDS. In recent years there has been coming into vogue in a few cities—fortunately as yet only in a few and to a very limited degree—a type of house which is fraught with very great social and civic consequences. This is the so-called "kitchenette apartment"—a building in which rooms are rented out singly or as "two rooms and bath." By utilizing a folding bed which disappears into a specially prepared "hole in the wall," one room is made to serve as two and sometimes as four. It serves as parlor and dining room by day and bedroom by night. Ingenious devices have been invented by which the folding bed is camouflaged as a mantelpiece in one case, in another as a sideboard or china cabinet or book-case. In some instances the bed swings up into a pocket in the ceiling, but generally into a closet in the wall. Very recently, a new form of revolving closet has been devised which turns on a sort of turnstile device so that one side of it serves as the space for the disappearing bed, another serves as a kitchen cabinet, a third as a dining room dresser, and the fourth as a living room book-case.

Irrespective of the broad question of social policy that is involved in the development of these types of homeless homes, there are sanitary evils that are involved in the wall-bed that should be dealt with. Beds folded into a dark pocket in the wall with all their bedding soon become unsanitary and a breeding place of vermin. The least requirement that can be imposed is to insist that the bed-closet shall be ventilated to the outer air.

If it is desired to enact such a requirement the following Variation is suggested:

Variation

VARIATION: § 41 A. WALL-BEDS. In every dwelling hereafter erected every closet or other space used to receive a bed or device for sleeping, shall have at least one window of such size and opening as provided for water-closets and bath rooms in section thirty-seven.

TITLE 2

SANITATION

§ 42. CELLAR ROOMS. In dwellings hereafter erected no room in the cellar shall be occupied for living purposes.

NOTE: Outside of the city of New York there is no city in the United States where it is necessary because of high land values and the pressure of population to permit new dwellings to be constructed with living accommodations in the cellar. Even under the best conditions cellar dwellings are injurious to humanity and should not be tolerated in future buildings. Cellars should be clearly differentiated from basements. For further discussion of this matter see notes under Section 2, Subdivision 13.

Explan-
ation

§ 43. BASEMENT ROOMS. In dwellings hereafter erected no room in the basement shall be occupied for living purposes, unless in addition to the other requirements of this act such room shall have sufficient light and ventilation, shall be well-drained and dry, and shall be fit for human habitation.

NOTE: In the laws of some cities and states in the past, elaborate conditions have been prescribed with regard to the occupancy of basement rooms, certain fixed standards having been imposed as to the height of ceiling above the adjoining ground, the presence of an areaway in front of the room and certain other conditions. It does not seem necessary to impose these conditions upon basement rooms, provided they comply with the other provisions of the act and in addition have sufficient light and ventilation, are well drained and dry, and are fit for human habitation. If the rooms are *basement* rooms, their ceilings must be at least one-half of their height above the adjoining ground. Under the provisions of Section 34, the rooms must be at least 8 feet high, and under the pro-

Explan-
ation

visions of other sections of the act every such room must open directly upon the outer air and be of a certain minimum size. The sole value of this section, therefore, is to give to the enforcing officials a "dragnet" power to interfere with the construction and occupancy of basement rooms that may not be fit for human habitation even though they may comply with the other provisions of the act.

§ 44. CELLARS, WATER-PROOFING AND LIGHTING.¹ Every dwelling hereafter erected shall have a basement, cellar or excavated space under the entire lowest floor, at least THREE feet in depth, or shall be elevated above the ground so that there will be a clear air space of at least TWENTY-FOUR INCHES between the top of the ground and the bottom of said floor so as to insure ventilation and protection from dampness. Such space shall in all cases be enclosed but provided with ample ventilation and properly drained. In every dwelling hereafter erected all walls below the ground level and also the cellar or lowest floor shall be damp-proof and water-proof. No special water-proofing shall be required except where soil conditions make it necessary.² When necessary to make such walls and floors damp-proof and water-proof, the damp-proofing and water-proofing shall run through the walls and up the same as high as the ground level and shall be continued throughout the floor, and the said cellar or lowest floor shall be properly constructed so as to prevent dampness or water from entering. All cellars and basements in dwellings hereafter erected shall be properly lighted³ and ventilated.

Explan-
ation

NOTE 1: Some of the worst conditions encountered in cities and especially in suburban and rural communities, arise from the practice in building small houses of setting them directly on the ground. This results in conditions of dampness which seriously affect the health of the occupants who constantly suffer from "rheumatism" and other diseases. In many sections during the stormy weather these rooms become flooded and the tenants are caused to suffer

not only great discomforts and inconvenience but often serious injury to health. This requirement is to obviate this situation. It should be noted that a cellar is not required in every case. Where a cellar is not provided, however, the building must be lifted above the ground at least 2 feet so as to prevent dampness. This space is required to be enclosed chiefly to prevent it from becoming a gathering space for waste materials of various kinds but at the same time the space is required to be left sufficiently open by means of grilles or latticework or in some other way so that it may be properly ventilated.

NOTE 2: The requirement that the walls below the ground level shall be damp-proof and water-proof is frequently misunderstood and thought to mean that some special system of damp-proofing or water-proofing shall be applied. This is not so. Where the natural soil conditions are such as to insure freedom from dampness in walls and floor, no special methods of damp-proofing are necessary, but where the soil conditions are not of this nature then appropriate precautions must be taken to prevent dampness in the

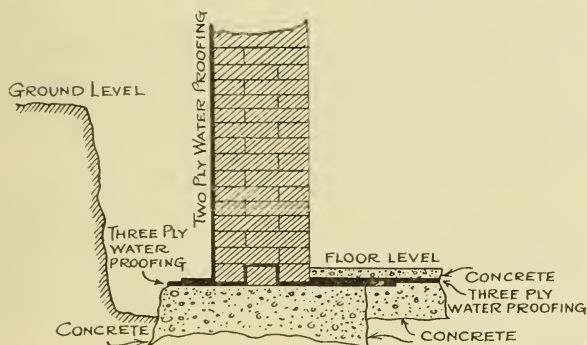


FIGURE 32
DAMP-PROOFING OF WALLS AND FLOORS

walls and lowest floor. The methods of damp-proofing that are most frequently employed where it is necessary to do such work are very simple and consist of courses of tar paper and hot tar properly applied. There are also other methods commercially in use that are quite wellknown. There is no diffi-

culty in making cellar walls and floors damp-proof by such methods except in cases where there is water pressure below, due to tidal effect. In such cases the problem becomes somewhat complicated. It is necessary then to keep the water out by weighting it down by means of inverted arches or other devices; but the ordinary housing reformer will not encounter this contingency in one case out of ten thousand. The diagram on the preceding page shows the method of damp-proofing employed where it is necessary to use any process.

NOTE 3: The requirement that cellars and basements shall be properly lighted and ventilated is of great importance. In the case of the dwellings of the poor the three danger points are the water-closets, public halls and cellars; that is, the parts of the building used in common and for which no single individual is as a rule responsible. Cellars are a special danger point and are apt to become filled with waste material of various kinds, the accumulation of which is injurious both to the health and safety of the occupants. This situation is likely to occur where cellars are not properly lighted. A large proportion of tenement house fires originate in such cellars. The health of the occupants also is bound to suffer materially from living over cellars which are not properly ventilated. Dampness is very likely to result from such a condition and the building is likely to be filled with unpleasant and unhealthful odors.

In order not to restrict the architect unnecessarily in the planning of his building, it has not been attempted to lay down any precise and exact method of lighting and ventilating the cellar which must be employed. This is left to the enforcing officials who can be counted upon to see that the cellar is properly lighted and ventilated.

§ 45. COURTS, AREAS AND YARDS.¹ In every dwelling hereafter erected all courts, areas and yards shall be properly graded and drained,³ and when required by the health officer they shall be properly concreted² in whole or in part as may be appropriate.

Explan-
ation

NOTE 1: The purpose of this requirement is to insure adequate drainage and to keep water from stand-

ing in puddles in the yards or from seeping into the walls of the building, thus creating conditions of dampness in the cellar and other lower portions. In some laws it is required that yards, areas, and courts shall extend down below the level of the cellar floor and be connected with the street sewer. In many cities, however, this is seriously objected to as unnecessary expense, requiring as it would, the excavation of the yard down to this lower level. It is also the custom in many cities to discharge the rain water from the house leaders directly on the ground, as the expense of conducting this to the street sewer is felt to be unnecessarily onerous. It is believed that the provision as written in this section will meet the situation in most cases and will do so with a minimum of friction.

NOTE 2: It will not do to require yards, courts, and areas to be concreted throughout, as in most cases it is desired to have such yards treated with grass plots and flower gardens. There are, however, numerous instances where this treatment is not had and where it is desirable from the point of view of proper drainage and cleanliness to have the yard concreted. In such cases the health officer will be empowered under this section to make this requirement.

NOTE 3: If it is desired to stiffen this section and impose more stringent requirements, the following variation is suggested. Insert at the beginning of this section, after the caption, the following:

VARIATION 1: "In every dwelling hereafter erected where courts, areas or yards extend to the basement or cellar, a portion of such court, area or yard not less than two feet wide shall extend down below the floor level of said basement or cellar." **Variation**

NOTE 4: If it is desired to require that such open spaces shall be connected with the street sewer, the following variation is suggested. After the words "graded and drained" in the original section, insert the following:

VARIATION 2: "and connected with the street sewer so that all water may pass freely into it" **Variation**

§ 46. WATER-SUPPLY.¹ In every dwelling hereafter erected, when water mains are reasonably accessible as provided in section nine of this act, there shall be a proper sink or wash-bowl with running water, exclusive of any sink in the cellar.² In two-family dwellings and in multiple-dwellings of Class A hereafter erected there shall be such a sink or wash-bowl in each apartment, suite or group of rooms.³ In such dwellings of Class B there shall be one such sink or wash-bowl for every fifteen occupants or fraction thereof.

Explan-
ation

NOTE 1: This requirement is for the purpose of securing an ample supply of running water inside the dwelling in future buildings and to prevent the unsanitary conditions which prevail in many cities where in the older buildings there is no water except such as can be obtained from a hydrant or pump in the back yard. Sometimes there is but one hydrant for many houses.

NOTE 2: The sole water-supply in future dwellings should not be located in the cellar, as this is too inconvenient a place for family use.

NOTE 3: In private dwellings the sink or wash-bowl may be located in any room or even in the hall of the house (except the cellar), but in two-family houses and multiple dwellings there must be one such sink or wash-bowl for each family.

NOTE 4: This section must be read in connection with Section 9. Where there is no communal water supply in a community, Section 46 will not apply.

§ 47. WATER-CLOSET ACCOMMODATIONS.¹ In every dwelling hereafter erected when water mains are reasonably accessible as provided in section nine, there shall be a separate² water-closet. Each such water-closet shall be placed in a compartment completely separated from every other water-closet; such compartment shall be not less than THREE feet wide,³ and shall be enclosed with partitions which shall extend to the ceiling⁴ and which shall not be of wood or other absorbent material. Every such compartment shall have a window opening directly upon

the street or upon a yard or court of the minimum sizes prescribed by this act and located upon the same lot.⁵ Nothing in this section contained shall be construed so as to prohibit a general toilet-room⁶ containing several water-closet compartments separated from each other by dwarf partitions, provided such toilet-room is adequately lighted and ventilated to the outer air⁷ as above provided, and that such water-closets are supplemental to the water-closet accommodations required by other provisions of this section for the tenants of the said dwelling. No drip tray⁸ shall be permitted on any water-closet. No water-closet fixture shall be enclosed.⁹ No water-closet shall be placed out of doors.¹⁰ No water-closet shall be placed in a cellar¹¹ without a written permit from the health officer. In two-family dwellings and in multiple-dwellings of Class A hereafter erected there shall be for each family a separate water-closet constructed and arranged as above provided and located within each apartment, suite or group of rooms. In multiple-dwellings of Class B hereafter erected there shall be provided at least one water-closet for every FIFTEEN occupants or fraction thereof. Every water-closet compartment hereafter placed in any dwelling shall be provided with proper means of lighting the same at night.¹² The floor of every such water-closet compartment shall be made water-proof¹³ with asphalt, tile, stone, terrazzo or some other non-absorbent water-proof material; and such water-proofing shall extend at least two inches above the floor so that the said floor can be washed or flushed out without leaking.

NOTE 1: This section is of great importance and contains a number of considerations which should be fully understood. In the first place, it requires in future dwellings that the water-closets shall be indoors. Where there are no public sewers, systems of cesspools or other approved form of sewage disposal in vogue in rural and suburban communities will have to be adopted. The section of course will not apply where there is no water supply and must be read in connection with Section 9. In such case

Explan-
ation

privies will have to be tolerated until such time as water supply is provided.

NOTE 2: It is deliberately intended to prevent in dwellings and in tenement houses and similar residence buildings any communal system of water-closets, as experience has shown that they are always abused. Each family is to have its own water-closet entirely within its own control, thus insuring freedom from the abuses which are generally found, greatly adding to the desirability of the apartments from a rental point of view, and materially aiding the landlord in placing responsibility for abuses when discovered.

NOTE 3: While it should not be necessary to fix a minimum width of water-closet compartment, it has been found necessary, as in some of our cities where land values are high, these compartments have been made just wide enough to take in the fixtures, sometimes less than 2 feet in width. Such conditions should not be tolerated.

NOTE 4: Unless partitions extend to the ceiling there cannot be proper privacy and separation of the sexes. This is essential to prevent many kinds of abuse. Wooden partitions are prohibited because of their absorbent nature, although plastered, stone, marble, slate or metal partitions may be used.

NOTE 5: Each water-closet must have its independent means of lighting and ventilation and in this respect this section must be read in connection with Section 37. It should be noted that this requirement as to partitions and the prohibition of wood does not apply to the case of a general toilet room such as is described in this section where the water-closets are separated by dwarf partitions which do not extend to the floor but are set up on legs. In such case wooden partitions may be used without any objection.

NOTE 6: It is necessary to provide specifically for general toilet rooms such as are found in hotels and sometimes in stores, especially saloons, located on the ground floor of apartment houses and tenement houses. There is no objection to this form of construction, provided these toilets are supplemental to those required for the use of the tenants and are adequately lighted and ventilated to the outer air.

NOTE 7: In the case of high-class modern hotels it

will be found difficult to light and ventilate such toilet rooms to the outer air and architects may desire to employ electric light and artificial ventilation. Such a method of construction is not desirable even in the case of this class of buildings and it is advised not to make any concession for them. If, however, it is felt to be desirable to yield to the wishes of these interests, the following concession may be made. After the words "provided such toilet-room is adequately lighted and ventilated," omit the following:

CONCESSION 1: "to the outer air as above provided"

Concession

NOTE 8: Drip trays are sheets of thin metal fastened between the wooden seat and the water-closet bowl and are intended to catch the drippings when the fixture is used as a urinal. They are antiquated and highly objectionable, as their effect is to keep a standing deposit of urine close to the wooden seat which soon becomes saturated and odoriferous.

Explanation

NOTE 9: The requirement that no water-closet fixture shall be enclosed with any woodwork is in line with the accepted practice in good plumbing work for the past twenty years. If the fixture is enclosed the space underneath it is sure to become dirty and often saturated with urine and other deposits, thus giving rise to sanitary evils. If the space is left open it will always be visible and can more easily be kept clean.

NOTE 10: The requirement prohibiting the placing of water-closets out of doors is of vital importance. There will be a difference of view as to the desirability of this in different sections of the country. In some communities it has been the custom for many years past to place water-closets out of doors. As a result of this practice some of our most serious sanitary evils have occurred. The outdoor water-closet is only slightly better than the privy vault. It has all the evils of the privy vault except the danger of soil contamination and pollution of the water supply. These, however, are evils not frequently encountered, as even where there is a local water supply it is generally so located that there is comparatively little danger from this cause. The chief danger from the privy vault is the spread of communicable disease through the medium of the common house-fly. There is just

as great danger from this in the case of the outdoor water-closet as there is from the privy vault. The other evils of the vault, namely, the disgusting condition in which outdoor fixtures are generally found and the resulting discomfort and serious effect upon the health of the people in the neighborhood, exist with equal force in the case of the outdoor water-closet. Located thus in a public place and easy of access to the casual passerby, the outdoor closet is bound to be abused and kept in a filthy condition. Except in the Southern states where there is a mild climate and where there is little danger from freezing, outdoor closets are generally out of commission through most of the winter, forcing the tenants to employ the "bucket" system, as there has not been developed as yet any really satisfactory device of anti-freezing fixture. In many cities in the North where outdoor closets are employed, a type of closet known as the "Philadelphia hopper" (because of its great use in that city) is usually employed. This is a long hopper water-closet, with all the evils of an extensive fouling surface which cannot be cleaned. The fixture is provided with a seat flush which operates by a valve, the water being released by pressure on the seat. The result is that when paper is left upon the seat and when snow sifts in, as it frequently does, the weight of the snow and wet paper starts the flush going and the water is kept running practically all the time, overflowing the toilet and making a skating rink out of the compartment and neighboring portions of the yard.

The evils of the outdoor closet are so great that under no circumstances should any compromise be made on this provision, either in the South or in the North. No city can call itself civilized which permits in its future work outdoor water-closets. The ultimate cost to the community resulting from such a system in the toll of disease and death is beyond calculation.

NOTE 11: The very worst conditions are usually found in cellar water-closets, due to the fact that they are apt to be located in the dark, without proper ventilation, and are generally accessible to any stray passerby and are therefore sure to be abused. The cellar water-closet is usually for these reasons kept in an indescribable condition. It will not do, however,

to prohibit cellar water-closets outright, as they are necessary sometimes for the use of stores on the ground floor in tenements, flats, and apartment houses and are especially necessary in hotels in the service quarters and also in many hotels in connection with barber shops, cafés and other rooms provided for the public. The requirement that no water-closet be placed in the cellar without a written permit from the health officer amply safeguards the community against the evils that have heretofore existed.

NOTE 12: It is obviously important that there shall be means of lighting water-closet compartments at night. It should be noted that this provision does not specify the means to be employed. Where electricity or gas is provided throughout the house these methods will naturally be furnished. In the quarters of the poor a kerosene lamp may be all that is possible.

NOTE 13: It is of importance that the floors of water-closet compartments shall be water-proof so that the whole water-closet compartment can be flushed out. This is necessary because of the fact that in the case of contagious disease the slop emptyings from the patient are emptied here. There are also apt to be drippings from the bowl when the fixture is used as a urinal and a wooden floor absorbing this soon becomes extremely objectionable. The only satisfactory scheme is a scheme that will permit the entire floor to be flushed out. In most cases such a water-proof floor will be provided, as the water-closet is generally located in the same room as the bath tub. It should be noted that cement as water-proof material is barred out because of its absorbent qualities. Terrazzo is a composition used everywhere. It is made of broken chips of marble and cement.

Objection may be made to this provision as imposing unnecessary expense upon working people who desire to build small dwellings for their own use. If this is found to be a serious objection, the following concession can be made. Before the words "The floor of every such water-closet compartment," insert the following:

CONCESSION 2: "In two-family dwellings and multiple-**Concession**
dwellings hereafter erected"

§ 48. SEWER CONNECTION.¹ No multiple-dwelling of Class A² shall hereafter be erected on any street unless there is city water and a public sewer in the street on which such dwelling abuts. No multiple-dwelling of Class B shall hereafter be erected on any street unless there is city water-supply and a public sewer reasonably accessible as provided in section nine. Every such multiple-dwelling of Class A shall have its plumbing system connected with the city water-supply and with a public sewer before such multiple-dwelling is occupied. No cess-pool or vault or similar means of sewage-disposal shall be used in connection with any dwelling where connection with a public sewer is practicable.

Explana-
tion

NOTE 1: This provision applies only to multiple dwellings. It should properly apply to private dwellings and to two-family dwellings, but it is believed that this would be considered too drastic by practically every community. Theoretically no community should permit the erection of dwellings until streets have been sewered and supplied with city water, as otherwise privies are necessary, but such a provision would undoubtedly be felt to stop the progress and development of the city and become a check upon the building industry. We shall probably be sufficiently civilized twenty-five or thirty years from now to impose such a requirement, but it does not seem to be wise to attempt it at this time. The situation with regard to multiple dwellings is, however, totally different. No large building housing a number of families should be permitted to be erected in sections of the city not provided with sewers and water supply. If that portion of the city is so slightly developed that sewers and water supply cannot be provided, the multiple dwelling is not an economic necessity and single-family dwellings and two-family houses can be built with propriety.

NOTE 2: It should be noted that the provisions for the two classes of multiple dwellings are radically different. This section absolutely prohibits the erection of multiple dwellings of Class A, that is flats, tenements, apartments and the like, unless there is city water and a public sewer *in the street*. When it

comes to multiple-dwellings of Class B, which include boarding houses, hotels, convents, asylums, hospitals and similar buildings, it is recognized that it might work hardship to prevent the erection of a small boarding house on the outskirts of a city, or of a convent or hospital similarly situated. This class of buildings is accordingly brought under the provisions of Section 9 which permits under proper safeguards the use of cesspools, septic tanks and even privies temporarily.

§ 49. PLUMBING. In every dwelling hereafter erected no plumbing fixture shall be enclosed¹ but the space underneath shall be left entirely open. Plumbing pipes shall be exposed, when so required by the health officer.² All plumbing work shall be sanitary in every particular and, except as otherwise specified in this act, shall be in accordance with the plumbing regulations³ of said city. All fixtures shall be trapped.⁴ Pan,⁵ plunger and long hopper closets shall not be installed. Wooden sinks⁶ and wooden wash-trays shall not be installed. Tile⁷ or earthen-ware house drains shall not be installed. In all multiple-dwellings hereafter erected where plumbing or other pipes pass through floors or partitions, the openings around such pipes shall be sealed or made air-tight with incombustible materials, so as to prevent the passage of air or the spread of fire from one floor to another or from room to room.⁸

NOTE 1: The reasons against the enclosure of plumbing fixtures with woodwork have been fully set forth in Note 9 of Section 47.

Explana-
tion

NOTE 2: It is not wise to require plumbing pipes in all cases to be exposed, as in certain classes of buildings, namely, high-class apartment houses, hotels, and similar structures, the tenants and guests would not care to see the rough plumbing and would find it a detriment to the rooms. In the ordinary tenement house, however, and in other classes of dwellings, it is entirely possible to have many of the pipes exposed. It is therefore left to the health officer to determine under what circumstances this shall be required.

NOTE 3: No attempt is made here to go into minute details of plumbing requirements such as the weight of pipe, kind of material and the numerous other details that are commonly found in plumbing rules and regulations. This can safely be left to the plumbing rules and regulations of the locality affected. What has been done here is to set down the irreducible minimum so as to prevent the use of materials or methods which have been shown to be injurious from the point of view of proper sanitation.

NOTE 4: The requirement that all fixtures shall be trapped does not mean that each fixture shall be trapped separately, although this is desirable; this is left to the local plumbing regulations to determine.

NOTE 5: Pan, plunger, and long hopper closets are antiquated types of fixtures with large fouling surface which should not be tolerated in modern construction. In many cities where good plumbing practice prevails such closets are required to be taken out when found even though they may have been installed only a few years before. (See Figure 33.)

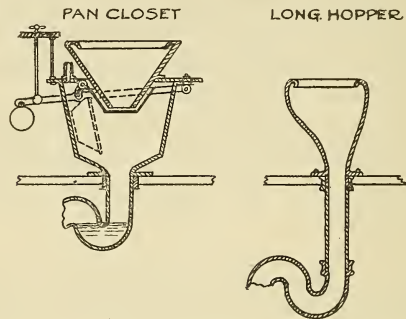


FIGURE 33
PAN AND LONG HOPPER CLOSETS

NOTE 6: Wooden sinks and wash trays are prohibited because they become rotten and saturated, breed vermin, and become odoriferous.

NOTE 7: Tile or earthen-ware house drains are prohibited because they are in most cases liable to break in a short time, thus permitting soil contamination.

NOTE 8: The requirement that the spaces around

pipes where they pass through floors in multiple dwellings shall be made air tight is of importance not only for the convenience of the tenants in preventing unpleasant odors communicating from one apartment to another, in shutting off sounds which would otherwise travel in a similar way, and in preventing vermin thus getting from one apartment to another, but especially as a means of reducing fire danger and preventing the transmission of contagious disease.

TITLE 3

FIRE PROTECTION

NOTE 1: There is much misunderstanding in the popular mind as to the relative importance of fire protection provisions as compared with the necessity of adequate open spaces. From an ideal point of view it would be incalculably better for the community if all houses erected in the future might be fire-resistive throughout. It would add greatly to the beauty of our cities, it would help conserve our forests by reducing the consumption of lumber, and would insure greater safety to the great mass of our population, though the danger from fire is more of a prospective evil than a real one. Considering the size of the population in each of our cities, the number of people who lose their lives each year from this cause is practically negligible. This is due, however, not to the methods of construction employed in our buildings but to the efficiency of our fire departments. The real advantage of having all buildings fire-resistive would be in the ultimate saving to the investor. Bills for insurance would be reduced to almost nothing and the cost of upkeep would be very materially diminished.

The great objection, however, to requiring all dwellings erected in the future to be fire-resistive throughout is that the cost at present would be prohibitive. The effect of this so far as the dwellings of the working people are concerned would be to augment greatly the cost of living. The time will undoubtedly come, and it is not far distant, when the cost of fire-resistive construction will be greatly reduced and this desirable ideal can be accomplished. For the present, however, in view of the considerations expressed, it seems unwise to attempt to bring about such a condition.

NOTE 2: It should be noted that all of the provisions of this title, which deals with fire protection in new buildings, with the exception of Section 50, relate solely to multiple dwellings. That is, none of these

additional precautions which are very necessary in the case of multiple dwellings are imposed upon private dwellings or two-family dwellings. The effect of this discrimination will be to make as cheap as possible the construction of private dwellings and two-family dwellings and therefore to encourage that type of development in our cities; while the imposing of these additional safeguards at additional cost upon multiple dwellings should have the effect of discouraging the erection of such buildings. The requirements imposed are in no sense prohibitive; multiple dwellings can still be erected in any city and be commercially profitable. Nor has any requirement in this title been imposed upon multiple dwellings solely with the idea of discouraging that type of construction; each provision will be found to be justified from experience and to be necessary for buildings of this class.

§ 50. FIRE-RESISTIVE DWELLING, WHEN REQUIRED.¹
 No dwelling shall hereafter be erected exceeding THREE²
 stories in height, unless it shall be a fire-resistive dwelling;
 the dwelling, however, may step up to follow the grade,
 provided no part of it is over THREE³ stories in height.⁴

Explana-
 tion

NOTE 1: The purpose of this section is a two-fold one. While it is primarily a provision for fire protection and would have to be justified on that ground if attacked in court, it is also of great importance in securing better light and ventilation and as a means of preventing congestion of population in the case of multiple dwellings. The way to prevent land overcrowding is to limit the number of people that may live on a given area of land. This can be done more effectively indirectly than it can directly. There is some doubt as to whether the courts would sustain an arbitrary limitation on the actual number of people that might live on a lot of a given size. If, however, the area of the building is limited by requiring large open spaces and the height of the building is limited, the result desired has been accomplished and by a method which the courts will unquestionably sustain. While there is no guarantee that this provision will absolutely prevent the erection of tall buildings, it is reasonably sure that at the present time, with the cost of fire-resistive construction as it is to-day, the effect of this provision will be to discourage greatly their erection.

NOTE 2: The standard has been set at three stories, but it should be noted that this is a variable standard to be changed in each city to suit the local conditions. It is highly desirable to keep residence buildings down to a three-story height. Where this is not practicable the standard should be changed to four, but no residence building should be permitted to be built higher than four stories without being made completely fire-resistive, viz., constructed with iron beams and girders and incombustible floors and partitions, as defined in Section 2, Subdivision 17. If local conditions indicate the necessity of permitting four-story buildings, the following concession may be wisely made. In this connection it is significant that the great city of Chicago over 10 years ago established

this standard of 3 stories for the limit of height of a non-fire-resistive dwelling, a standard which has been successfully maintained throughout this period. The result has been that Chicago in its residence portions has become a "3-story city." This example should be controlling for nearly every other city in America. What Chicago has done, smaller cities can assuredly do.

The thing for each community to do is to determine whether they want their city to be a "3-story city" or a "6-story city"—or what; and fix the standard accordingly.

CONCESSION: Change "THREE" to "FOUR" in both instances where it occurs in this section. **Concession**

NOTE 3: This section must be read in connection with the definitions of cellar and basement as contained in Section 2, Subdivision 13. In other words, if the standard is set at 3 stories, a 3-story and basement building will have to be fire-resistive; a building 3 stories and cellar in height will not. This is deliberate, as the basement type of building is not a desirable one to encourage for many reasons. Where a basement is erected it means that the basement part is to be used for living purposes and the equivalent of a four-story building is in most cases likely to result. **Explanation**

NOTE 4: This provision will work no hardship to any class of building, especially if the standard is made four stories. The millionaire's mansion will in no case be over four stories high. Apartment houses and similar multiple dwellings that are erected over four stories high should be fire-resistive. Hotels over that height would be fire-resistive anyhow and no one would seek any concession in this direction.

§ 51. MEANS OF EGRESS.¹ Every⁷ multiple-dwelling hereafter erected exceeding one story in height shall have at least two independent² ways of egress which shall extend from the ground floor to the roof, and shall be located remote from each other, and each shall be enclosed by walls or partitions as provided elsewhere in this act. One of such ways of egress shall be a flight of stairs³ constructed

and arranged as provided in sections fifty-four, fifty-five and fifty-six of this act. In multiple-dwellings of Class A the second way of egress shall be directly accessible⁵ to each apartment, group or suite of rooms without having to pass through the first way of egress. In multiple-dwellings of Class B⁶ the second way of egress shall be directly accessible from a public hall. The second way of egress may be any one of the following, as the owner may elect⁴:

1. A system of outside balcony fire-escapes constructed and arranged as provided in section fifty-two of this act.
2. An additional flight of stairs, either inside or outside,⁹ constructed and arranged as provided in sections fifty-four, fifty-five and fifty-six of this act.¹⁰
3. A fire-tower¹¹ located, constructed and arranged as may be required by the inspector of buildings.¹¹

Explana- tion

NOTE 1: The plan adopted here differs from the plan which has heretofore been embodied in many of our tenement house laws; namely, a requirement for fire-escapes upon multiple dwellings of a certain class. Instead of this it has been thought better to adopt the practice which has been coming into favor more generally in recent years of requiring two ways of egress.

NOTE 2: The chief purpose of this is to enable the occupants of the building to have quick egress in case of fire by a means other than that used ordinarily. It is of course essential that these two ways of egress shall be independent of each other. It is equally important that they shall extend from the entrance floor to the roof so that in case egress is cut off on the ground floor, access may be had to the roof of the building and from there to the roofs of adjoining buildings, when they do adjoin. It is also obvious that access must be had to the street entrance, as otherwise the tenants would be left hanging in mid-air and would have to be rescued by firemen. If the two ways of egress are not independent but are merged at any point except near the entrance of the building, the supplementary means of exit will lose its value, because in the event of the ordinary means of exit being enveloped in smoke or flames the supplementary exit would be similarly out of commission. For this reason it is especially important that the two ways of

egress shall be remote from each other and that they shall be separated by walls or partitions so as to prevent the spread of smoke or flames from one to the other.

NOTE 3: The usual type that will be adopted will be a front and back stairs, as the back stairs serve a useful purpose as service stairs.

NOTE 4: It should be noted that the greatest freedom of choice consistent with the safety of the occupants of the dwelling has been given to the owner. One flight of stairs he would naturally provide of his own accord, irrespective of any provisions of law, in order to give the occupants of the building access to their rooms. (In the case of elevator apartment houses such stairs would not be necessary, but even here it would generally be provided so as to anticipate a situation where the elevators might be out of commission.) This takes care of one way of egress. The other way of egress may be any one of three which the owner may elect,—another flight of stairs either inside or outside, a system of outside fire-escapes or a fire-tower. No reasonable person can object to this requirement.

NOTE 5: It is of great importance to have these supplementary exits, whether fire-escapes or a second flight of stairs, easily accessible to the occupants of the building. The requirement as to accessibility differs radically in the two classes of multiple dwellings. In the first class, namely, the residence buildings, apartment houses, tenement houses, and so forth, the second way of egress or fire-escape to be of any value must be directly accessible to each apartment. If tenants have to pass through a public hall (the other way of egress) to get to the fire-escape it is of little value, as experience has shown that the public hall invariably becomes filled with smoke and flames in such cases almost immediately after the outbreak of fire, the hall acting as a gigantic chimney or flue. This is a point where there can be no compromise. Many architects who have not had special experience with regard to fires will not realize the importance of this point. Others who may be building apartment houses and who wish to remove fire-escapes from the front of the building in order to maintain the beauty of its architectural appearance will desire to be per-

mitted to locate fire-escapes off the public hall, but under no circumstances can this safely be permitted. Such fire-escapes would be of little value in this class of buildings and loss of life would be sure to result if a serious fire broke out.

NOTE 6: The requirements are radically different in the case of multiple dwellings of Class B; namely, hotels and buildings of a similar character occupied for transient purposes. While it would be desirable to have here a second way of egress or fire-escape directly accessible from each room, this is not practicable in view of the fact that such buildings are usually divided up into a large number of single rooms with an occupant in each room. To require any such plan of fire protection would practically mean a fire-escape balcony at every window. Therefore, in the case of hotels and similar buildings access to the fire-escapes is required to be had from a public hall.

NOTE 7: It is to be observed that the requirement for the second way of egress applies to all classes of multiple dwellings, both fire-resistive and non-fire-resistive, as experience has shown that even in the case of a fire-resistive apartment house it is not safe to rely upon a single way of egress in case of fire. The rooms of such apartments are filled with inflammable material in the furnishings and serious fires can result.

NOTE 8: Some interests may contend that elevators should serve as one of the ways of egress. This contention is not sound and should not be permitted. Elevators can never be counted on in the case of a serious fire as a means of getting tenants out, as the elevator shaft is apt to become filled with smoke and flames at an early stage of the fire. The best fire authorities refuse to recognize elevators as ways of egress.

NOTE 9: In some cities it has become the custom to erect two-family houses, tenements and flats with a front and rear stairs, the rear stairs being an outside stairs, generally of wood, with wooden balconies which are utilized, as a rule, as living porches and practically add an additional room to the apartments. This has become a firmly established type of construction in a number of cities and is much desired by the tenants. The objections to this form of construction have been very fully set forth in the discussion of Sec-

tion 41. Because of the desire to perpetuate this type of house, which has become a fixed fashion in many cities, there will be strenuous opposition to the provision of this section which requires the second way of egress to be of fireproof construction, and it will be very earnestly desired in certain classes of multiple dwellings to permit the use of outside wooden stairs and balconies. In some cities it may be necessary to make some concession. If so, the following concession is suggested. Add at the end of Subdivision 2 of Section 51 the following:

CONCESSION: "In the case of multiple-dwellings of Class A hereafter erected which do not exceed three stories in height and which are not occupied by more than four families in all, such additional flight of stairs may be an outside stairs of wood with wooden balconies, if located on the rear wall of the dwelling and kept entirely unenclosed.¹⁰⁷"

NOTE 10: It should be noted that this provision will permit the use of these outside wooden balconies and stairs in the case of tenements two stories high

Concession

Explanation

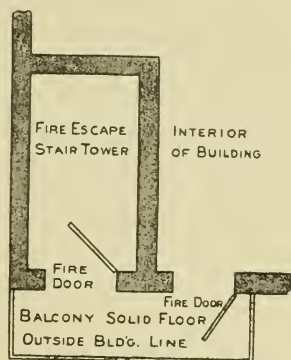


FIGURE 34
FIRE-TOWER

with two families on a floor and also in the case of tenements three stories high with not more than one family on a floor, but it not permit them in buildings exceeding three stories in height or containing

more than two families on a floor irrespective of height.

NOTE 11: A fire-tower is a type of construction that is highly esteemed by fire authorities. It is generally a flight of stairs in a separate tower with a bridge or platform thrown across to it from the main building. It sometimes consists of an inclined plane or gradient of metal highly polished, permitting the occupants of the building to sit down upon it and slide to the bottom, on the method of the "chute the chutes" common in many pleasure resorts. This is an excellent type of quick escape to get the people to the bottom in a short time without injury. When used, care should be taken to see that the knob of the entrance door giving access to it is located at a sufficient height so as to make it impossible for children to use it as a day-time plaything.

§ 52. FIRE-ESCAPES. All fire-escapes hereafter erected on multiple-dwellings¹ shall be located and constructed as in this section required. Such fire-escapes shall be located at each story the floor of which is TWELVE or more feet above the ground.² Access³ to fire-escapes shall not be obstructed in any way. No fire-escape shall be placed in an inner court.⁴ Fire-escapes may project into the public highway⁵ to a distance not greater than four feet beyond the building line. All fire-escapes shall consist of outside open iron,⁶ stone or concrete balconies and stairways.⁷ All balconies shall be not less than THREE feet in width. All stairways shall be placed at an angle of not more than SIXTY degrees to the horizontal, with flat⁸ open steps not less than SIX inches in width and TWENTY-FOUR inches in length and with a rise of not more than EIGHT inches. The openings for stairways in all balconies shall be not less than TWENTY-FOUR by TWENTY-EIGHT inches,⁹ and shall have no covers¹⁰ of any kind. The balcony on the top floor, except in the case of a balcony on the street or in the case of a peaked roof house, shall be provided with a stairs or with a goose-neck ladder leading from said balcony to and above the roof¹¹ and properly fastened thereto. A drop ladder¹² or stairs shall be provided from the lowest balcony

of sufficient length to reach to a safe landing place beneath. All fire-escapes shall be constructed and erected to safely sustain in all their parts a safe load, and if of iron shall receive not less than two coats of good paint, one in the shop and one after erection. In addition to the foregoing requirements, all fire-escapes hereafter erected upon multiple-dwellings shall be constructed in accordance with such supplementary regulations¹³ as may be adopted by the inspector of buildings or by the local legislative body.

NOTE 1: It should be observed that the requirements for fire-escapes apply only to multiple dwellings, for the reasons which have been set forth in the notes appended to Title 3.

Explana-
tion

NOTE 2: The fire-escapes cannot of course extend to the ground, as this would disfigure the front of the building, give ready access to thieves and would not be practicable. A balcony should be located, however, at the second story or the first above the ground. The point of 12 feet above the ground has been established here as being a reasonable distance and as providing for cases in multiple dwellings where there is a store on the first floor and a high ceiling is desired.

NOTE 3: Access to fire-escapes must be easy. If wash tubs, sinks and other fixtures are put in the way of the window and the access to the window thus narrowed, there may be loss of life.

NOTE 4: Fire-escapes in inner courts are as a rule of little value; that is, in an inner court of the minimum sizes prescribed by this act. There may be very large inner courts where this criticism would not apply, but such a condition is very rare. The objection to a fire-escape in an inner court is that the court being enclosed on four sides acts as a flue and in case of fire is apt to become filled with smoke. A fire-escape in a court is also a detriment in that it encroaches upon the space left open for light and air.

NOTE 5: It is necessary to provide that fire-escapes may project into the highway beyond the building line in order to prevent adroit owners from refusing to erect fire-escapes on the ground that they are encroaching on the public highway. Without this special provision such a contention would be plausible

and might be sustained by the courts. It is best to take no chances.

NOTE 6: Wooden fire-escape balconies are of little use as they would quickly be consumed if the fire were anywhere near the balconies. Iron is what will generally be used, although there are cases where owners will wish to use stone or concrete in order to make the treatment of the front of their building harmonize with its general architectural scheme. This of course should be permitted.

NOTE 7: Fire-escapes to be effective must consist of stairs, not ladders. Women, old people, invalids and children cannot use vertical ladders. Even if they could go down them they will not think they can and the fire-escapes will therefore lose their value as a means of giving such persons quick egress from the building in case of fire. It is the universal experience that where vertical ladders are used firemen invariably have to rescue the tenants and carry them down the ladders. The stairs will cease to be stairs if they are placed at too great an angle so as to be nearly perpendicular. There will be a constant tendency on the part of owners to do this as it will make possible shorter fire-escape balconies, thus reducing the cost and also putting less weight upon the walls of the building, but it must not be permitted. Sixty degrees is the maximum angle that should be permitted; 45 would be better.

NOTE 8: The steps must be flat, not round double rungs as are put on a ladder, as these will not seem to have the security of stairs and heels will catch in them. The minimum dimensions herein laid down are necessary in order to secure stairs that are not too steep or too narrow and that will give a firm foothold.

NOTE 9: Fire-escape openings must be large enough to permit persons of ordinary size to get through them readily. It is surprising what a small hole people can get through if they have to. The minimum established here has been fixed upon as sufficient in most cases.

NOTE 10: Covers over the openings of fire-escape balconies should not be permitted. Some people will want to provide hinged covers because of accidents occasioned by people falling through the openings, children playing on them, and so forth. When fire

comes the covers will be found to be rusted down or to be covered over and cannot be moved and people will be burned to death. The balconies should be kept free and for the purpose of escape in case of fire. Fire-escapes are not playgrounds.

NOTE 11: It often happens that owing to the location of the fire, escape is cut off below and tenants cannot go down the fire-escape balconies; they therefore must be given a chance to go up and escape from the roof to the roof of a neighboring building. That is why the goose-neck ladder to the roof is made necessary. In such cases tenants can be rescued from the roof by firemen, or more frequently can flee to adjoining roofs. Such a ladder is as necessary at the front of a building as at the rear. To require it, however, in some cases would mean disfigurement.

NOTE 12: Drop ladders are necessary from the lowest balconies; otherwise the tenants cannot get down. Such ladders should be light in weight, not too long, but always long enough to reach to the ground. In some cities a type of counter-balanced stairs is required; this works on weights and when not in use, is kept hanging in the air in a horizontal position at the level of the lowest balcony. By stepping on one of the steps the weight of the body brings the ladder into vertical position; this, however, is an awkward, heavy and cumbersome device and is objected to by property owners as an unnecessary disfigurement to their building, and rightly so. It gets out of order quite as frequently as a drop ladder, if not more so. Drop ladders will often be found rusted tight and therefore should be frequently inspected to see that they are in working order.

NOTE 13: All the essential requirements for fire-escape balconies, their location and construction, are contained in this section. Other details of their construction, such as the sizes of iron, methods of bolting, and so forth, may be safely left to supplementary regulations to be adopted by the inspector of buildings or other public official performing similar functions or by the local legislative authorities.

§ 53. ROOF EGRESS; SCUTTLES AND BULKHEADS.¹ Every flat-roofed multiple-dwelling hereafter erected exceeding one story in height shall have in the roof a bulkhead² or a

scuttle not less than two feet by three feet in size. Such scuttle or bulkhead shall be fire-resistive or covered with metal on the outside and shall be provided with stairs leading thereto and easily accessible³ to all occupants of the dwelling. No scuttle or bulkhead shall be located in a closet or room, but shall be located in the ceiling of the public hall on the top floor, and access through the same shall be direct and uninterrupted.

Explan-
ation

NOTE 1: The purpose of this requirement is two-fold. First, to afford a means of egress to the roof of the building and thence to the roofs of adjoining buildings and to safety in the event of escape below being cut off. This is valuable only in the case of flat-roofed houses. Its second purpose is to afford a means by which smoke and flames can be quickly vented. The firemen by pushing up the scuttle and venting the smoke and flames can quickly save the building, whereas without this the building might be destroyed.

NOTE 2: The bulkhead is a sort of small penthouse or structure on top of the roof; in this case it is an enclosure for the stairs leading to the roof. It is necessary because without it the stairs cannot extend to the roof and afford means of exit that way. It should be noted that this provision does not require a bulkhead but gives the owner the option of furnishing either a bulkhead or a scuttle. A bulkhead with stairs leading to the roof of multiple dwellings occupied by many families is undoubtedly better than a scuttle with a ladder leading to it. The requirement that the scuttle or bulkhead shall be covered on the outside with metal is to secure the safety of the building in the event of fire in the neighborhood and prevent sparks which may blow to the roof from burning through the scuttle or bulkhead, as would be likely if of wood and unprotected.

NOTE 3: If egress to the roof is to be relied upon it must be easily accessible to the occupants of the building. If the ladder leading to the scuttle is locked up in a closet, the key is apt to be missing when fire breaks out and the tenants relying on this means of egress would then become trapped in the hallway on the top floor. A further provision will be found in

Section 115 prohibiting the locking of any scuttle or bulkhead with a key for similar reasons.

§ 54. STAIRS AND PUBLIC HALLS. Every multiple-dwelling hereafter erected shall have at least one flight of stairs extending from the entrance floor to the roof, and the stairs and public halls therein shall each be at least THREE feet wide in the clear. All stairs shall be constructed with a rise of not more than EIGHT inches and with treads not less than TEN inches wide and not less than THREE feet long in the clear. Winding stairs will not be permitted.

NOTE: The requirement that the stairs shall afford roof egress has already been shown to be a necessity. Three feet is the minimum width appropriate for stairs in buildings used by many occupants. In fact this is a little too narrow and many owners will build stairs wider than this. It is important to limit the rise of the stair to not more than 8 inches for two reasons: a steeper rise will be found dangerous in case of fire, as people running down in a hurry will fall and pile themselves up in a mass at the foot; stairs steeper than this are also injurious to climb, especially in the case of women. Winding stairs are prohibited because in case of fire people in their hurry to get out are likely to fall and pile themselves up in a huddled mass at the foot, thus causing injury and in many cases death.

§ 55. STAIR HALLS. In multiple-dwellings¹ hereafter erected which exceed TWO stories in height or which are occupied by more than TWO families on any floor above the entrance story,² the stair halls³ shall be constructed of fire-resistive material throughout. The risers, strings and balusters shall be of metal, concrete or stone. The treads shall be of metal, slate, concrete or stone, or of hard wood⁴ not less than two inches thick. Wooden hand-rails to stairs will be permitted if constructed of hard wood. The floors of all such stair halls shall be constructed of iron, steel or concrete beams and fire-resistive filling, and no wooden flooring or sleepers shall be permitted.

Explanation

NOTE 1: Again it should be noted that this provision for fire-resistive stairs applies only to multiple dwellings and even then only to certain types of multiple dwellings. Stair halls in private houses and two-family houses can be built of ordinary wooden construction.

NOTE 2: It should be observed that there is a double condition imposed in this section with regard to the class of buildings affected; namely, the building must be either over two stories in height or be occupied by more than two families on a floor to have the provision apply. If either of these conditions exist, then the section applies; that is, if the building is a three-story building with only one family on a floor the stair hall must be fire-resistive. Again, if the building is but two stories high and there are three families on a floor above the first, the stair hall must be fire-resistive.

NOTE 3: The stair halls in multiple dwellings are the danger points in case of fire. No matter where the fire starts, the invariable experience is that it spreads almost immediately to the stair hall, which acts as a gigantic flue. Furthermore, this is the normal place of escape for the occupants of the building. Their first instinct is to rush to the means of egress which they ordinarily use. It is essential, therefore, that such portions of the building shall be fire-resistive throughout so that when the fire gets there it may quickly burn itself out and have nothing to feed upon. In buildings constructed as provided in this section and with a ventilating skylight over the stairs, as is required in Section 39, a fire would quickly burn itself out and be vented at the roof, thus insuring the safety of the occupants.

NOTE 4: Hard wood treads are permitted if not less than 2 inches thick because such a tread will be slow in burning and could not possibly burn through before the tenants would have a chance to escape. Treads of this kind permit the stairs to have a finish which a slate or marble tread does not give; as the structure of the stairs is made of iron, stone or concrete, they will in most cases be supported by an iron, stone or concrete tread or frame beneath them.

§ 56. STAIR ENCLOSURES. In all multiple-dwellings¹ hereafter erected which exceed TWO stories in height or

which are occupied by more than TWO families on any floor above the entrance story, all stair halls shall be enclosed² on all sides with walls of brick³ not less than eight inches thick or other approved fire-resistive material of sufficient strength, except that one or more sides may be left open⁴ to the street, yard or court. The doors opening from such stair halls shall be fire-resistive and self-closing.⁶ There shall be no transom or sash or similar opening⁵ from such stair hall to any other part of the house.

NOTE 1: This section applies only to certain classes of buildings, as explained in Notes 1 and 2 under the discussion of Section 55. Explanation

NOTE 2: It has been pointed out in Note 3 under the discussion of Section 55 that the stair hall is the danger point in the multiple dwelling. This being so, the complete fire-resistive construction of stair halls is the keystone of the arch of safety of the building. In order to prevent fires spreading from stair halls to apartments or rooms,—“mushrooming out,” as it is called,—the stairs must be enclosed in brick walls. Where the stair halls are separated from the apartments by the ordinary lath and plaster partition, the fire quickly eats its way through it.

NOTE 3: It may be asked why these walls are limited to brick or other “approved” fire-resistive material. The stair hall is so strategic a point in the fight against fire that no chances with inferior material can be safely taken here, whatever may be permitted in other parts of the dwelling. It is important, too, that these walls or partitions should be thick enough and strong enough to stand up against water pressure in a fierce fire when the hose is turned on them. For this reason it is required that the walls shall be eight inches thick if of brick, and of sufficient strength if of other material.

NOTE 4: This exception is made so as to permit the use of outside stairs and of “open stairs,” or stairs with one side open to the outer air.

NOTE 5: The ideal condition would be to have the stair hall shut off completely from the apartments without any openings from the stair hall to the apartments. This, however, is of course impossible, as there must be door openings in the walls enclosing

the stair hall to give the tenants access to their rooms; but these should be the only openings. Transoms or windows, either movable or stationary, should under no circumstances be permitted, not even when they are made of wire-glass. No liberties can be taken with this vital point of the building. Each opening means weakness. For these reasons it is deemed necessary that the doors leading from the hall to the apartments shall be both fire-resistive and self-closing, so that in the event of fire, if the fire starts in an apartment it cannot quickly eat through the panels of a wooden door and thus communicate to the stair hall and spread throughout the building endangering the lives of the occupants; nor, vice versa, can the fire eat through from the stair hall to the apartments of the tenants. For this reason a fire-resistive door is necessary. This does not mean an iron door; the ordinary "kalomein" door is entirely adequate; this is a wooden door the edges and sides of which have been carefully covered with metal. It is a standard fire door recognized by the underwriters throughout the country. Many fire authorities consider it better than a metal door as it is slow-burning and will not warp in case of extreme heat as an iron door would. The manufacture of metal-covered doors has been so perfected that it is difficult for the ordinary observer to tell them from wood, stained and finished as they are to represent oak or mahogany; thus they are not an eye sore when used in high-grade buildings.

NOTE 6: The requirement that the doors shall be self-closing is for the purpose of safeguarding the situation where a tenant is aroused by a cry of fire or smells smoke, opens the door of his apartment leading to the stair hall, is met by a gust of smoke or flame and rushes back into his apartment and thence to the fire-escape, leaving the door from the apartment to the hall open, thus permitting the flames to enter the apartment and destroy it. The self-closing door insures the closing of the door even if the occupant becomes panic stricken. This is a very important requirement. It involves no material cost, as the purposes of the act are met if the door is provided with a strong spiral spring or is so hinged as to close itself, as can easily be done by giving the hinge a slight inclination.

§ 57. ENTRANCE HALLS. Every entrance hall in a multiple-dwelling hereafter erected shall be at least FOUR FEET SIX INCHES wide¹ in the clear, and shall comply with all the conditions of the preceding sections as to the construction of stair halls.² In every multiple-dwelling hereafter erected, access³ shall be had from the street or alley to the rear yard, either in a direct line or through a court or side yard.

NOTE 1: As the tenants from all the upper stories in case of fire have to use the same entrance hall to get access to the street, it is obvious that it is necessary to have the entrance hall wider than the individual halls on each story. The minimum prescribed here is the minimum. Most builders will leave a wider entrance hall. Five feet is none too wide.

Explan-
ation

NOTE 2: The entrance hall, as it is an essential part of the way out of the building in case of fire, will of course have to be constructed fire-resistive in the same way that the stair halls are at each story.

NOTE 3: Access from street to yard is important both as a means of egress for the tenants who may go down the rear fire-escapes or rear stairs, and also as a means of access to the rear of the building for the firemen who may wish to fight the fire from the rear of the building and who might be prevented from so doing if there were not such rear access. The best access is on the ground floor in a direct line from the street by extending the entrance hall to the yard. Sometimes this is not feasible. In such cases the next best access is by a tunnel or passageway through the cellar in a straight line from the street to the yard.

§ 58. DUMB-WAITERS AND ELEVATORS. In multiple-dwellings hereafter erected all dumb-waiters and elevators shall be enclosed in fire-resistive shafts¹ with fire-resistive doors at all openings at each story, including the cellar. In the case of dumb-waiters such doors shall be self-closing.² No elevator shall be permitted in the well-hole of stairs³ but every elevator shall be completely separated from the stairs by fire-resistive walls enclosing the same.

Explan-
ation

NOTE 1: Any vertical shaft, such as an elevator or dumb-waiter shaft, extending throughout the building, is a potent means of spreading fire, as it acts as a flue, and fire leaps from floor to floor almost immediately. It is therefore essential for the protection of the building that such shafts be completely enclosed within fire-resistive walls, with fire doors at all openings, especially in the cellar, as the cellar is the greatest danger point, owing to the accumulation of waste materials usually found there.

NOTE 2: In the case of dumb-waiters the doors should be self-closing for the reasons pointed out in Note 6 in the discussion of Section 56. This is not feasible in the case of elevators, as elevators are equipped with sliding doors which cannot be self-closing. Nor is there such necessity, as elevators are always operated by some individual who can be relied upon to keep the doors closed for purposes of safety.

NOTE 3: Until very recently the practice has been general not only in multiple dwellings but in public buildings such as office buildings, and so forth, of locating the elevators alongside the public stairs and even in the same well-hole. Recent experience with one or two disastrous fires, however, has shown that the elevator with its greased tracks is a potent source of danger in case of fire and that stairs located alongside the elevators are likely to be useless if fire breaks out in the region of the elevators. For this reason the recent practice not only in housing laws but in building codes is to require the elevators to be completely separated from the stairs by fire-resistive walls.

§ 59. CELLAR STAIRS.¹ In multiple-dwellings of Class A hereafter erected which exceed TWO stories in height or which are occupied by more than TWO families on any floor above the entrance story, there shall be no inside stairs communicating between the cellar or other lowest story and the floor next above, but such stairs shall in every case be located outside the building.

Explan-
ation

NOTE 1: One-fourth of all fires in multiple dwellings start in cellars. These frequently contain much rubbish and waste material, and tenants and sometimes outsiders throw matches on the cellar floors. For

these reasons the cellar is a danger point. In order to safeguard the lives of the tenants the cellar should be completely shut off from the upper parts of the building. In the larger buildings this should be done by a tier of fire-resistive beams and fire-resistive flooring, and in all multiple dwellings there should be no inside communication between the cellar and the upper stories. If there is such communication in the form of an inside stairs, a fire which starts in the cellar will quickly spread throughout the building and endanger the lives of the occupants. While it is slightly inconvenient for tenants to have to go outside of the building into the yard or court to get down into the cellar, that inconvenience is not comparable to the danger arising from the other form of construction. This inconvenience can be minimized by locating the outside stairs immediately adjoining the rear wall of the building or the court wall and thus not causing any material inconvenience. In elevator apartment houses both the elevator shafts and dumb-waiter shafts will extend down into the cellar, but as these will, under the provisions of Section 58, be entirely enclosed with brick walls and be provided with fire doors, the danger of fire spreading through this means is practically reduced to a minimum.

NOTE 2: Where serious objection is made to the requirement, the following Concession may safely be adopted, which it should be noted applies to *all* classes of multiple dwellings and not merely to those of Class A.

CONCESSION: "In multiple-dwellings hereafter erected **Concession** which exceed TWO stories in height or which are occupied by more than TWO families on any floor above the entrance story, all inside stairs communicating between the cellar or other lowest story and the floor next above shall be enclosed with brick walls not less than eight inches thick or with walls of approved fire-resistive material of sufficient strength, and shall be provided with self-closing fire-resistive doors at the bottom and shall not be located underneath the stairs leading to the upper stories."

§ 60. CLOSET UNDER FIRST STORY STAIRS. In multiple-dwellings hereafter erected no closet of any kind shall be constructed under any staircase leading from the entrance story to the upper stories, but such space shall be left entirely open and kept clear and free from incumbrance.

Explan-
ation

NOTE: Closets should not be permitted under stairs leading to the upper stories. If they are, waste materials will accumulate. Sometimes oily rags will be thrown into them by servants, engineers or tenants. Spontaneous combustion may take place and the whole stairs suddenly be on fire.

§ 61. CELLAR ENTRANCE. In every multiple-dwelling hereafter erected there shall be an entrance to the cellar or other lowest story from the outside of the said building.

Explan-
ation

NOTE: The purpose of this section is to enable the firemen to quickly get at a cellar fire and control it.

§ 62. WOODEN MULTIPLE-DWELLINGS.¹ No wooden multiple-dwelling of Class A³ shall hereafter be erected, and no wooden building not now so used shall hereafter be altered or converted to such use.

No wooden multiple-dwelling of Class B⁴ shall hereafter be erected exceeding two and one half stories in height, and no wooden building⁵ exceeding two and one half stories in height shall hereafter be altered or converted to such use.

Explan-
ation

NOTE 1: This section deals with a type of construction peculiar to New England and the dominant type in the city of Boston and its environs. It is known as the wooden "three-decker." It is a 3-story tenement house built of wood, generally with a flat roof, frequently with front piazzas and almost invariably with rear porches at each story, with an outside rear stairs serving as a service stairs. The chief objection to it is the conflagration hazard. It is a menace both to the community in which it is built and to the people that live in it. The building is also a great depreciator of values and is said to ruin neighborhoods in which it is placed; for, it is an extremely

objectionable looking type of house and at once converts what was a select private residence district into a tenement quarter.

Outside of New England the type is almost unknown. The cost of building a 3-story flat with outside walls of brick instead of wood, is so slightly in excess of the wooden three-decker that there is really no reason for encouraging this objectionable type. In fact it is only the initial cost that is greater. The brick building is the better investment in the long run. For further discussion of this question see paper entitled "The Menace of the Three-Decker" by Prescott F. Hall, Chairman, Town Improvement Committee of the Brookline Civic Society, Brookline, Mass., in "Housing Problems in America," Volume V. 1916, pages 133 to 152, also National Housing Association publications No. 39.

It is significant that in the Report of a Commission appointed by the Mayor of Boston to study Boston's Housing Problems, they recommend that the construction of wooden three-deckers be prohibited in future, asking,

"What Is the Advantage of the Wooden 'Three-Decker' Multiple Dwelling?

"It furnishes reasonably sanitary, well-lighted, well-ventilated homes at low rents. Persons of small capital can invest in them when they cannot afford to take the risk of larger and more expensive buildings.

"What Are the Disadvantages?

"The usual wooden 'three-decker' is cheaply built and therefore deteriorates rapidly. After the first few years it is apt to be neglected both by owner and tenant. It is unsightly. When a great number of these buildings cover a district all other property tends to depreciate in the vicinity. And there is of necessity a constant fire risk in such a district.

"What Is the Substitute?

"Noncombustible walls, or second-class construction. With the increasing cost of lumber this type of building will not be of much greater cost at the outset. At the end of fifteen years the second-class building will be worth far more than the wooden building and will have before it a much longer future. Wooden piazzas or porches may be added to brick or concrete buildings for comfort and beauty. A type of dwelling

can be provided which is a benefit to landlord, tenant and community as well.

"The committee offers herewith an amendment to the present building law forbidding the future erection of multiple dwellings of third-class construction."

NOTE 2: In some of the larger cities wooden tenement houses are permitted. They should not be tolerated. They are not only a danger in case of fire but when old become a source of sanitary evil, filled with vermin and disease germs. No new wooden tenement houses are necessary. Where land values are so low that brick or concrete cannot be profitably constructed tenement houses are not necessary but the population can be profitably housed in one-family or two-family dwellings.

NOTE 3: This section not only prohibits the erection of the "three-decker" or 3-story wooden tenement, but of *all* wooden tenements. It would therefore prevent the erection of a type known to some communities, viz., a two-story wooden building with 2 families on each floor, or 4 in all. This is deliberate. There is really no reason why such buildings should be erected. The outside walls can be built of brick, concrete or clay products without any difficulty and without making the cost of such a building prohibitive.

NOTE 4: It will be noted that the erection of wooden multiple dwellings of Class B is permitted. The reason for this is that it would be a hardship in many communities to prohibit the erection of small wooden boarding houses, lodging houses and hotels, and especially to prohibit the alteration of a private dwelling into a small boarding house. All of such buildings, however, are very properly limited to two and one half stories in height.

NOTE 5: The chief opposition to this section will come from owners of existing wooden private dwellings who want to be allowed to convert them into multiple dwellings without making any alterations whatsoever. They should not be allowed to do so. For further discussion of this subject see Note 2 under Section 3.

ALTERATIONS

ARTICLE III ALTERATIONS

In this article will be found the provisions which must be observed when a person proposes to alter an existing dwelling.

NOTE: At first sight it will seem to many that most of the provisions in this article are a repetition of provisions to be found in Article II. While it is true that some of them could be combined with similar sections in the article relating to new buildings, they have purposely been placed in a separate article for the sake of greater clarity and greater facility of use. One of the chief advantages of this law lies in this very fact, that it is so divided into separate parts, that it is made possible for different interests to concern themselves only with those provisions of the law which directly affect them. For example, the owner of an existing dwelling will have to concern himself only with the maintenance provisions (Article IV) and improvements (Article V), and of course the general provisions which contain the definitions (Article I). He will not have to wade through the detail of the provisions which affect new buildings. Similarly, the builder who wants to erect a new dwelling will have to concern himself only with Articles I and II, and the owner of an existing building in the event of his contemplating alterations will have to concern himself only with the provisions of this article, namely, Article III.

Explana-
tion

§ 70. PERCENTAGE OF LOT OCCUPIED. No dwelling shall hereafter be enlarged or its lot be diminished, or other building placed on its lot, so that a greater percentage of the lot shall be occupied by buildings or structures than provided in section twenty of this act.

Explana-
tion

NOTE: It is obvious that it is not fair to permit an old dwelling to be altered so as to cover more of the lot than would be permitted in the case of a new one. The conditions are naturally better in the newer building. Failure to safeguard this point would lead to the almost complete evasion of the law with respect to new buildings as was shown by the experience of an Eastern city some years ago, referred to in Note 1 under the discussion of Section 3. This provision not only forbids the extension of an existing dwelling beyond the limits specified, but also prohibits the erection of other buildings or structures on the same lot so as to cover more land than is permitted.

§ 71. HEIGHT. No dwelling shall be increased in height so that the said dwelling shall exceed the height prescribed by section twenty-one of this act. This provision shall not apply to hotels as defined in paragraph four of section two.

Explana-
tion

NOTE: This does not prohibit the increase in height of an existing dwelling but does prohibit such increase beyond the limits allowed for new dwellings.

§ 72. YARDS. No dwelling shall hereafter be enlarged or its lot be diminished, or other building placed on the lot, so that the rear yard or side yard shall be less in size than the minimum sizes prescribed in sections twenty-two, twenty-three and twenty-four of this act for dwellings hereafter erected.

Explana-
tion

NOTE: It should be observed that this does not prohibit the alteration or extension of existing dwellings or the encroachment on an existing yard, but only prohibits reduction of the minimum size of a rear yard or side yard below the standard established for new dwellings.

§ 73. NEW COURTS IN EXISTING DWELLINGS.¹ Any court hereafter constructed in a dwelling erected prior to the passage of this act and used to light or ventilate rooms,² public halls or water-closet compartments shall be

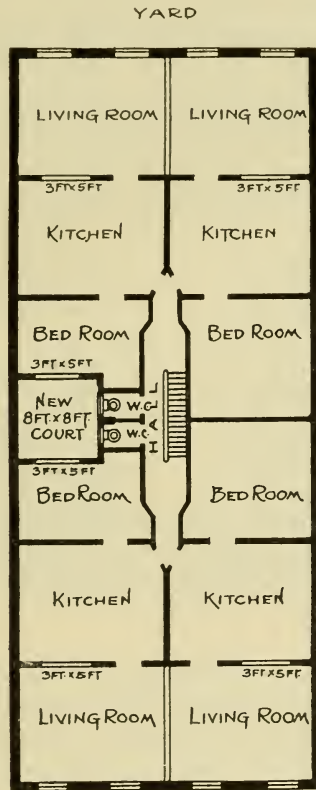


FIGURE 35
NEW COURT IN AN OLD BUILDING

not less in its least horizontal dimension in any part than ONE THIRD of its height measured as prescribed in section twenty-five and such court shall under no circumstances be roofed or covered over with a roof or skylight. Every such court, if an inner court, shall be provided at

the bottom with one or more horizontal air-intakes constructed and arranged as provided in section twenty-seven of this act.

Explana-
tion

NOTE 1: This section prescribes the limits in width and area of a new court which may be hereafter constructed in an existing dwelling to provide light and ventilation for rooms, public halls or water-closets. It will be noted that this requirement corresponds to the requirement for courts in new dwellings.

NOTE 2: This section assumes especial significance in connection with the requirement contained in Section 120, where a scheme is laid down for the bringing of light and air into the inner dark, windowless rooms which exist in so many cities. There are two methods by which such rooms can be improved. The simpler and cheaper method is the one outlined in Section 120; namely, the cutting in of a window in the partition between the inner and outer room. There will be cases, however, where the owner desires to make greater improvements than this and to construct a small court in the building for the purpose of lighting the inner rooms and also the new water-closets which he intends installing in the building in cases where there have been vaults or similar receptacles out of doors and where, under the provisions of Section 124, these have to be removed. In such instances it is to the owner's interest, as well as greatly to the interest of the tenants, to have a small court constructed in the building.

§ 74. ADDITIONAL ROOMS AND HALLS. Any additional room or hall that is hereafter constructed or created in a dwelling shall comply in all respects with the provisions of article two of this act, except that it may be of the same height as the other rooms or hall on the same story of the dwelling.

Explana-
tion

NOTE: This is a necessary provision, as otherwise apartments and rooms in existing dwellings could be subdivided and dark rooms and rooms too small in size could be created.

§ 75. ROOMS AND HALLS, LIGHTING AND VENTILATION OF. No dwelling shall be so altered or its lot diminished that

any room or public hall or stairs shall have its light or ventilation diminished in any way not approved by the health officer.

NOTE: It has been found necessary to enact this "drag-net" provision, as it is not always possible to state in detail all of the circumstances which may arise in connection with the alteration of the interior of existing dwellings. Without such a provision it has been found that alterations which prove injurious to the welfare of the occupants are often brought about. For example, an extension could be added to an existing dwelling in such a way as greatly to diminish the

Explan-
ation

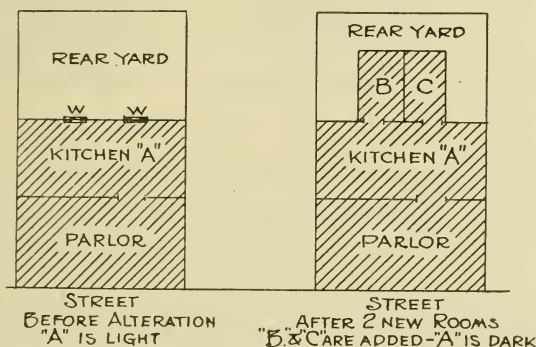


FIGURE 36

light and ventilation of existing rooms, although the new rooms thus created might have adequate light and ventilation. The above diagram illustrates this. A represents an existing room which, before the extension was added, was flooded with light and air. Since the addition of the extension and the creation of two new rooms, B and C, A has become almost uninhabitable, though rooms B and C are strictly legal and are desirable rooms.

In a similar way without a provision of this kind it would be possible where an existing public hallway extends to the rear of the dwelling, running through from the street to the yard and thus affording ample light and ventilation, to shut this off and make a room at either end of the hall, thus making the hallway

dark and without ventilation. Figure 37 illustrates this. The left-hand diagram shows the hallway as it was originally. The right-hand diagram shows the same public hallway after this undesirable alteration.

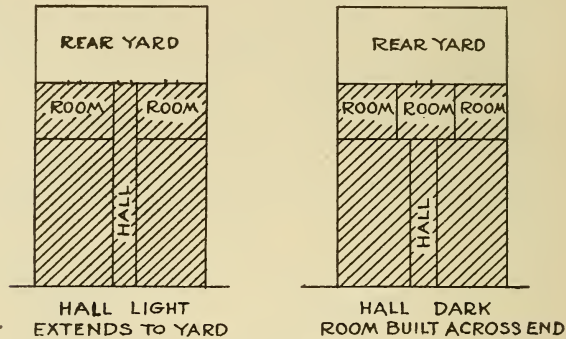


FIGURE 37

§ 76. ALCOVES AND ALCOVE ROOMS. No part of any room in a dwelling shall hereafter be enclosed or subdivided, wholly or in part, by a curtain, portiere, fixed or movable partition or other contrivance or device, unless such part of the room so enclosed or subdivided shall contain a window as required by sections thirty-one and thirty-two of this act, and have a floor area not less than that required by section thirty-three.

Explanation

NOTE: The necessity for not permitting dark alcove rooms has been fully discussed in the notes under Section 35. It is apparent that if we do not wish to have new dark rooms created in the future there must be a provision of this kind to prevent the alteration of rooms in this way.

§ 77. SKYLIGHTS. All new skylights hereafter placed in a multiple-dwelling shall be provided with ridge ventilators having a minimum opening of FORTY square inches and also with either fixed or movable louvres or with movable sashes, and shall be of such size as may be determined to be practicable by the health officer.

NOTE: It should be noted that this provision requires no change in existing skylights. It applies only to those which may hereafter be placed in an existing house; it also applies only to multiple dwellings. This is an attempt to improve the existing conditions of light and ventilation, especially ventilation, in the dark hallways of existing multiple dwellings. The conditions vary so greatly in different buildings that experience shows it to be unwise to attempt to outline in the law in precise terms the exact conditions which must be observed.

Explana-
tion

§ 78. WATER-CLOSET ACCOMMODATIONS. Every¹ water-closet hereafter placed in a dwelling, except one provided to replace a defective or antiquated fixture² in the same location, shall comply with the provisions of sections thirty-seven, forty-seven and forty-nine of this act relative to water-closets in dwellings hereafter erected. Except that in the case of a new water-closet installed on the top floor of an existing dwelling,³ a ventilating skylight open to the sky may be used in lieu of the windows required by section thirty-seven.

NOTE 1: It is obvious that it will not do to permit new water-closets to be placed in old buildings located in the dark, or with antiquated fixtures, or without waterproof floors, or in other ways to perpetuate the evils of the older types of fixtures.

Explana-
tion

NOTE 2: An exception is properly made in the case where a new fixture is put in to replace a defective or antiquated fixture, provided it is in the same location. For instance, there will frequently arise cases where there are broken fixtures located in compartments which are not lighted and ventilated directly to the outer air. The health of the occupants of the house requires the broken fixture to be taken out and a new fixture substituted. Unless this provision were made it would be unlawful to replace the old fixture because the closet is not lighted and ventilated to the outer air. From an ideal point of view it would be desirable to require all existing water-closets which are not now lighted and ventilated to the outer air to be abandoned and a new location found for them,

but this is not a practicable plan, as it involves too great an expenditure of money and sacrifice of space on the part of the owner for the results obtained.

NOTE 3: It is often desired to construct a new bath room or place an additional water-closet on the top floor of an existing dwelling in a location where there will not be a window to the outer air but a skylight can be used instead. Ample light and air can thus be obtained and there is no harm in permitting this to be done. This assumes especial importance in connection with the removal of privy vaults required under Section 124. This important work will be greatly facilitated if owners realize that they can place the water-closets that are to be substituted for the privy vaults on the top floor of the building and light and ventilate them by ventilating skylights in the roof. No attempt has been made to lay down in the law the minimum size of the skylight or the amount of ventilation to be secured, as there would be no object on the part of the owner in reducing this below a proper standard.

§ 79. FIRE-RESISTIVE DWELLINGS. No dwelling shall hereafter be altered so as to exceed THREE stories in height unless it shall be a fire-resistive dwelling.

Explan-
ation

NOTE: This section prohibits the extension in height of an existing dwelling above the limits prescribed for new dwellings laid down in Section 50. If the limit of height there established is changed from three stories to something else, the standard in this section should be similarly changed to correspond.

§ 80. FIRE-ESCAPES. All fire-escapes hereafter constructed on any multiple-dwelling shall be located and constructed as prescribed in section fifty-two of this act.

Explan-
ation

NOTE: This section in no way affects existing fire-escapes. It applies only to those which may be hereafter erected upon a multiple dwelling. It is obvious that all new fire-escapes that are constructed in the future, whether upon a new dwelling or an old one, if the fire-escapes are themselves new, should conform to the provisions of the law with regard to fire-escapes on new dwellings.

§ 81. ROOF STAIRS. No stairs leading to the roof in any multiple-dwelling shall be removed or be replaced with a ladder.

§ 82. BULKHEADS. Every bulkhead hereafter constructed in a multiple-dwelling shall be constructed fire-resistive or covered with metal on the outside.

NOTE: The reasons for requiring bulkheads to be covered with metal on the outside have been fully set forth in the discussion under Section 53. Explanat
tion

§ 83. STAIRWAYS. No public hall or stairs in a multiple-dwelling shall be reduced in width so as to be less than the minimum width prescribed in sections fifty-four and fifty-seven of this act.

§ 84. DUMB-WAITERS AND ELEVATORS. All dumb-waiters and elevators hereafter constructed in multiple-dwellings shall be enclosed in fire-resistive shafts with fire doors at all openings at each story, including the cellar, in the case of dumb-waiters such doors shall be self-closing; and such shafts shall be completely separated from the stairs by walls of approved fire-resistive material enclosing the same.

NOTE: This section does not apply to dumb-waiter shafts or elevator shafts which are already in existence, but only to new ones which may be installed after the act takes effect both in new dwellings and in existing ones. The reasons for this requirement have been fully set forth in the discussion under Section 58. Explanat
tion

§ 85. ALTERATION OF EXISTING WOODEN MULTIPLE-DWELLINGS. No existing wooden multiple-dwelling of Class A¹ shall hereafter be enlarged, extended or raised, except that a wooden extension not exceeding a total area of seventy square feet may be added, provided such extension is used solely for bath rooms or water-closets. Nor shall any such existing wooden multiple-dwelling be so altered or have its occupancy so changed as to be occupied

by more than one family on any floor. No existing wooden multiple-dwelling of Class B² shall hereafter be increased in height so as to exceed two and one-half stories in height.

Explan-
ation

NOTE 1: As new tenement houses constructed of wood are entirely forbidden, it is obvious that the increase in height of existing wooden tenement houses should not be permitted. It will not do, however, to prohibit absolutely any alteration to such buildings. Additions will of necessity have to be made in some cases, especially where privy vaults are removed and water-closets are installed. It would be absurd to require the new extension to a wooden tenement house in which water-closets are to be located to be of brick. On the other hand, there are limits which should be strictly observed. It will not do to permit the indefinite extension of wooden tenement houses or any material increase in the number of families living in such dangerous buildings. It is therefore wise to prohibit their alteration so that they will not be occupied by more than one family on a floor. This does not mean that the existing wooden tenement house which now houses two or even more families on a floor cannot be altered at all. The language is precise. It means that the house shall not be so altered as to provide accommodations for more than one family on a floor if these accommodations are not there at the time the law takes effect. The objections to wooden tenement houses have been fully set forth in the discussion under Section 62.

NOTE 2: It obviously will not do to permit existing wooden boarding houses and hotels to be altered to exceed two and one half stories in height, when the erection of new ones beyond that height is prohibited under Section 62.

§ 86. WOODEN BUILDINGS ON SAME LOT WITH A MULTIPLE-DWELLING. No wooden building of any kind whatsoever shall hereafter be placed or built upon the same lot with a multiple-dwelling within the fire limits, and no existing wooden structure or other building on the same lot with a multiple-dwelling within the fire limits shall hereafter be enlarged, extended or raised.

NOTE: This section is intended to prohibit the erection of wooden sheds and out-buildings and similar unsightly and dangerous structures on the same lot with multiple dwellings in the built-up portions of cities. Such structures are a menace in case of fire and are also objectionable for sanitary reasons. They are subject to rapid decay and become harboring places for dirt, disease germs and vermin.

Explanation

ARTICLE IV

MAINTENANCE

In this article will be found the provisions which an owner must observe with regard to the maintenance of a dwelling.

§ 90. PUBLIC HALLS, LIGHTING OF IN THE DAYTIME. In every multiple-dwelling where the public halls and stairs are not in the opinion of the health officer sufficiently lighted, the owner of such dwelling shall keep a proper light burning in the hallway near the stairs upon such floors as may be necessary from sunrise to sunset.

Explan- ation

NOTE: This provision is for artificial light in the daytime. In some houses where the halls and stairs do not have windows to the outer air or are lighted and ventilated by courts too small in size the halls are often dark in the daytime. Owing to the varying conditions which exist in the different types of old houses, it is not wise to attempt to prescribe definitely in the law the exact conditions under which it shall be necessary to keep artificial light burning. This is a case where the matter must be left to the intelligence and common sense of the health officer. It is greatly to the interest of owners to comply with this section; otherwise, in the event of injuries resulting to a tenant through falling on the stairs, the landlord would be liable for damages. The requirement is limited to multiple dwellings.

§ 91. PUBLIC HALLS, LIGHTING AT NIGHT. In every multiple-dwelling a proper light shall be kept burning by the owner in the public hallways near the stairs upon each floor every night from sunset to sunrise throughout the year if so required by the health officer.

NOTE: This is a provision for lighting the public halls and stairs at night. It applies only to multiple dwellings and is important from the point of view of protection against fire and also from the point of view of morality. Where halls are dark, especially in tenement houses, tenants and visitors are apt to strike matches to find their way, often throwing the match on the floor before it is fully extinguished. Many fires start in this way. Dark halls have also been found to encourage immoral practices. It has not been attempted to state precisely in the act the conditions under which the light shall be kept burning. As in the preceding section, it is left to the intelligence and common sense of the health officer. In some multiple dwellings of the higher class it is unnecessary to maintain a light all night. In others it is essential.

Explana-
tion

§ 92. WATER-CLOSETS IN CELLARS. No water-closet shall be maintained in the cellar¹ of any dwelling without a permit in writing from the health officer, who shall have power to make rules and regulations governing the maintenance of such closets. Under no circumstances shall the general water-closet accommodations of any multiple-dwelling be permitted in the cellar or basement thereof; this provision, however, shall not be construed so as to prohibit a general toilet room² containing several water-closets, provided such water-closets are supplementary to those required by law.

NOTE 1: No city should permit the maintenance in the cellar of the general water-closet accommodations of a multiple dwelling. From a sanitary point of view nothing could be worse. The objections to the cellar water-closet have been fully set forth in the discussion under Section 47. It is sometimes necessary, however, to permit individual water-closets in cellars. There may be stores on the ground floor and no space for the water-closet there. There may be janitors' apartments in the cellars and there must be single water-closets there, but the health officer should have the power to see that all water-closets are maintained under proper conditions.

Explana-
tion

NOTE 2: The necessity for excepting a general toilet room in a high-class hotel where the closets in the toilet room are supplementary to those required by law has already been discussed under Section 47.

§ 93. WATER-CLOSET ACCOMMODATIONS. In every dwelling existing prior¹ to the passage of this act there shall be provided at least one water-closet for every TWO apartments, groups or suites of rooms, or fraction thereof.² Except that in multiple-dwellings of Class B³ there shall be provided at least one water-closet for every FIFTEEN occupants or fraction thereof.

**Explan-
ation**

NOTE 1: It should be observed that this section deals with the sufficiency of water-closet accommodations in dwellings existing prior to the passage of the act. So far as new dwellings are concerned this subject is taken care of in Section 47. The ideal requirement would be to have in all multiple dwellings, both old and new, especially those of a residential character, one water-closet for every family. This is requisite not only for decency but for health. The public water-closet is a potent source of spreading venereal disease and where responsibility for its use is divided, experience shows that it is nearly always kept in a neglected and unsanitary condition. It would be deemed extreme in some cases, however, to impose this requirement on owners of existing houses. One water-closet for every two families, however, is only what decency requires. Nothing less than this should be tolerated. The family or the apartment in the case of buildings of this type is the best basis of measurement. One water-closet to so many occupants is difficult of enforcement, as the number of occupants in such houses is a variable element. The number of apartments in the building, which is practically the number of families, is on the other hand a constant factor. If it is found practicable to raise the standards and require one water-closet for every family, the following variation is suggested:

Variation

VARIATION: Strike out the words "two apartments, groups or suites" and insert "apartment, group or suite"

NOTE 2: It should be observed that where there are not a sufficient number of water-closets already in existence for the number of apartments in the building and it is necessary to provide new water-closets, the new water-closets will have to conform to the requirements of Sections 37, 47, and 49 as provided in Section 78.

Explan-
ation

NOTE 3: In the case of multiple dwellings where the occupancy is of a transient nature, such as hotels, boarding houses, lodging houses, and so forth, namely, those of Class B, it is not practicable to require one water-closet for each group of rooms, as the rooms are apt to be let singly. The only standard that can be fixed here is on the basis of the number of occupants. This is not a satisfactory standard but will on the whole give reasonably satisfactory results. One closet for every 15 persons is the minimum. A similar requirement will be found in most of the labor laws of the country in the regulations for factories where many people are employed.

§ 94. BASEMENT AND CELLAR ROOMS. No room in the cellar¹ of any dwelling² erected prior to the passage of this act shall be occupied for living purposes. And no room in the basement of any such dwelling shall be so occupied without a written permit³ from the health officer, which permit shall be kept readily accessible in the main living room of the apartment containing such room. No such room shall hereafter be occupied unless all the following conditions are complied with:

- (1) Such room shall be at least SEVEN feet high in every part from the floor to the ceiling.
- (2) The ceiling of such room shall be in every part at least THREE FEET SIX INCHES above the surface of the street or ground outside of or adjoining the same.
- (3) There shall be appurtenant to such room the use of a water-closet.
- (4) At least one of the rooms of the apartment of which such room is an integral part shall have a window opening directly to the street or yard, of at least TWELVE square

feet in size clear of the sash frame, and which shall open readily for purposes of ventilation.

(5) The lowest floor shall be water-proof and damp-proof.

(6) Such room shall have sufficient light and ventilation, shall be well drained and dry, and shall be fit for human habitation.⁴

Explanation

NOTE 1: There is no city in America except New York which needs to countenance the occupancy of cellar rooms for living purposes. Most cellar rooms are unfit to be used as living places by human beings; nor is there in many cities such lack of living accommodations, or pressure of population or inability to spread out as to make necessary going underground for homes. Notwithstanding these facts it is surprising to find the extent to which cellar rooms are occupied for living purposes in many of our cities. It is because no effort has been made to prevent this evil. Such rooms are generally low priced and there are always plenty of people who will live under any conditions, no matter how bad, if they are permitted to. This evil should be dealt with with a stern hand. If, however, it is felt necessary to make concessions in this respect and to permit the occupancy of rooms in cellars, the following concession might be considered. (There are a few cellars under exceptional conditions which can be safely occupied.)

Concession

CONCESSION: After the fifth word "cellar" insert the following: "or basement" and strike out the period after "purposes" and also the following words: "And no room in the basement of any dwelling shall be so occupied"

Explanation

NOTE 2: It should be noted that this section relates solely to rooms in cellars and basements already in existence at the time the act takes effect. The conditions which govern the occupancy of cellar and basement rooms in new dwellings will be found in Sections 42 and 43 and in those other provisions of Article 11 which deal with the size and ventilation of rooms, and so forth.

NOTE 3: In order to prevent the continuance of improper conditions it is essential that the health

officer should have complete control over the occupancy of basement and cellar rooms at all times. This can best be secured by requiring a written permit from the health officer stating that such rooms can be occupied. It is also desirable to require that a copy of the permit shall be kept in one of the rooms of the apartment so that it can be seen by anyone inspecting the rooms as occasion may require.

NOTE 4: The essential conditions which make a basement room fit for occupancy are that the rooms shall be sufficiently high, shall be reasonably above ground, shall have proper light and ventilation and be free from dampness. Certain definite standards are therefore established in this section. It is recognized, however, that these standards may be observed and yet, owing to some reason unforeseen, the rooms may not be fit for human occupancy. The health officer should under such circumstances be free to refuse a permit, to forbid their occupancy. The "drag-net" clause requiring that the rooms shall have sufficient light and ventilation, shall be well drained and dry, and shall be fit for human habitation is therefore added. Under the terms of this latter provision if any basement rooms are occupied that are not fit for occupancy, the fault will rest with the health officer who can be quickly called to account.

§ 95. CELLAR WALLS AND CEILINGS. The cellar walls and cellar ceilings of every dwelling shall be thoroughly whitewashed or painted a light color and shall be so maintained. Such whitewash or paint shall be renewed whenever necessary, as may be required by the health officer.

NOTE: This is a sanitary measure. A coat of whitewash on cellar walls and ceilings will do wonders as a germ destroyer. It will also lighten up dark cellars and thus show up dirt and rubbish as it accumulates. The cost of a coat of whitewash is negligible. This section applies to *cellar* walls, not to basement walls.

Explan-
ation

§ 96. WATER-CLOSETS AND SINKS. In all dwellings the floor or other surface beneath and around water-closets

and sinks shall be maintained in good order and repair and if of wood shall be kept well painted with light colored paint.

Explanation

NOTE: The purpose of this requirement, especially the painting of the woodwork underneath water-closets and sinks, is to insure the keeping of these places in a sanitary condition. As they are frequently in the dark, where accumulations of dirt and filth do not show, the painting of the floor surface underneath them with white paint will at once show up such accumulations, thus leading to their removal. Objection may be raised to this provision in its application to high-class private dwellings, where the owners of such houses have a good hardwood floor in their bathrooms and object to having a square of white paint under the water-closet fixture. Where such objection is raised and is raised seriously the following concession is suggested:

Concession

CONCESSION: Omit everything after the word "repair."

§ 97. REPAIRS. Every dwelling and all the parts thereof shall be kept in good repair by the owner, and the roof shall be kept so as not to leak, and all rain water shall be so drained and conveyed therefrom as not to cause dampness in the walls or ceilings or nuisance to adjacent buildings:

Explanation

NOTE: In some cities the requirement is made that not only rain water shall not cause dampness in the walls or ceilings but that it shall be conveyed from the premises so as to prevent the water from dripping on the ground. This means that a system of rain leaders and gutters must be provided on the outside of the building and these in turn either connected with the sewer or the plumbing system of the building, where there is one, or conducted to the street by means of a gutter under the surface of the yard or court. This is a perfectly proper provision but in the smaller communities where the customary method is to permit the water to drip on the ground, objection is made to it out of all proportion to the benefits to be obtained. Where it is possible to require that the

water shall not drip on the ground it is highly desirable and the following variation is therefore suggested. After the words "and conveyed therefrom as" strike out the rest of the section and insert the following:

VARIATION: "to prevent its dripping on to the ground or causing dampness in the walls, ceilings, yards or areas, or nuisance to adjacent buildings." Variation

§ 98. WATER-SUPPLY.¹ Where a public water-supply is reasonably accessible as provided in section nine of this act⁵ every dwelling shall have within the dwelling at least one proper sink with running water furnished in sufficient quantity at one or more places exclusive of the cellar.² In two-family dwellings and multiple-dwellings of Class A there shall be at least one such sink on every floor, accessible to each family on the floor occupied by said family without passing through any other apartment.³ The owner shall provide proper and suitable tanks, pumps or other appliances⁴ to receive and to distribute an adequate and sufficient supply of such water at each floor in the said dwelling at all times of the year, during all hours of the day and night. But a failure in the general supply of city water shall not be construed to be a failure on the part of such owner, provided proper and suitable appliances to receive and distribute such water have been provided in said dwelling.

NOTE 1: A plentiful supply of pure water is probably the greatest essential of modern civilization, far more important than protection against fire or the elements. Without an adequate supply of water we cannot expect to have good citizens. Cleanliness is in this instance above godliness or rather part of it. Most of the unsanitary and disgraceful conditions which are found in the slums of our cities are due to the lack of a proper water supply within the dwelling convenient of access to all the tenants. Where all the water that must be used can be had only from a hydrant in the yard or from some neigh- Explan-
ation

boring yard and has to be carried up three or four flights of stairs, cleanliness is at a premium; not only cleanliness of the person but cleanliness of the dwelling. The unregenerate slum landlord will strenuously object to furnishing water inside the house but we are on safe ground in insisting on no abatement in this provision. It was a similar provision enacted in New York state in 1887 that was tested and went to the Court of Appeals, which resulted in the decision known as the case of *Health Department vs. Rector*, 145 N. Y., where the requirement to furnish water inside the building in all existing tenement houses was not only sustained but a decision was rendered by that court which greatly strengthened the authority of the police power generally throughout the country.

NOTE 2: Sanitary conditions will not result if the only source of water supply is a sink in the cellar. Such sinks are bound to be located in the dark and be subject to abuse. They are also too convenient of access to passersby and neighbors and for this reason are likely to be abused. It is also imposing on the tenants on the top floor too great a burden to have to carry water from the cellar to the top story.

NOTE 3: It should be noted that this provision does not go to the extent of requiring a separate sink in each apartment, though this is highly desirable. In new dwellings (Section 46) this is required, but it might be considered a hardship to impose a similar requirement in the case of the older buildings. What is required, however, is that there shall be at least one sink with a proper supply of running water inside of each dwelling, and that in the case of tenement houses, flats and apartments, and similar buildings there shall be such a sink inside of each apartment or in the public hall accessible to all the families on that floor.

NOTE 4: The requirement that the owner shall provide proper and suitable tanks and other appliances means that he shall provide faucets at the sinks, and that when the city water pressure is not adequate to supply water to the top floors he must install a system of tanks, or pumps, or some other mechanism that will insure an adequate supply for such floors at all times. This is essential not only for reasons

of cleanliness and morality but especially important in case of fire.

NOTE 5: This section is of course subject to the limitations of there being a communal water supply in the town and must be read in connection with Section 9.

§ 99. CISTERNS AND WELLS. Where there is no city water-supply reasonably accessible as provided in section nine, there shall be provided one or more adequate cisterns or wells with a pump or other attachment for drawing water, but with no opening for drawing water with pails or buckets. Such cisterns or wells shall be furnished of such size and number and constructed and maintained in such manner as may be determined by the health officer.

NOTE: This is necessary in undeveloped communities of a suburban or rural character where there is no communal water supply and where it is necessary to utilize cisterns or wells. It has not been thought wise to attempt to outline in the law the detailed requirements as to the size or number of such cisterns or wells, but these details have necessarily been left to the local health officer.

Explanation

§ 100. CATCH-BASINS. In the case of dwellings where, because of lack of city water-supply or sewers, sinks with running water are not provided inside the dwellings, one or more catch-basins or some other approved convenience for the disposal of waste water, as may be necessary in the opinion of the health officer, shall be provided in the yard or court, level with the surface thereof and at a point easy of access to the occupants of such dwelling.

NOTE: This is a provision similar to the preceding one and applies in similar communities where there is no city water or no sewer system, and where some system of disposing of waste water, and so forth, other than carrying it down and dumping it in the yard or emptying it out of the window should be provided. Catch-basins are a necessary temporary evil and should not be tolerated one moment beyond the introduction of a water and sewer system. The

Explanation

catch-basin that is referred to here is a small iron basin or grating sunk in the ground into which waste water can be emptied and can drain under the surface of the ground.

§ 101. CLEANLINESS OF DWELLINGS. Every dwelling and every part thereof shall be kept clean and shall also be kept³ free from any accumulation of dirt, filth, rubbish, garbage or other matter in or on the same, or in the yards, courts, passages, areas or alleys connected with or belonging to the same. The owner¹ of every dwelling, and in the case of a private-dwelling the occupant thereof, shall thoroughly cleanse or cause to be cleansed all the rooms, passages, stairs, floors, windows, doors, walls, ceilings, privies, water-closets, cesspools, drains, halls, cellars, roofs and all other parts² of the said dwelling, or part of the dwelling of which he is the owner, or in the case of a private-dwelling the occupant, to the satisfaction of the health officer, and shall keep the said parts of the said dwelling in a cleanly condition at all times. But this section shall not be construed⁴ to require the owner to keep clean the individual apartments of a two-family dwelling or a multiple-dwelling of Class A, except where such apartments are unoccupied. It shall be the duty of each occupant to keep the portion of the dwelling occupied by him and over which he has control in a cleanly condition at all times.

Explana-
tion

NOTE 1: This is an important provision and places upon the owner of all dwellings other than private dwellings the responsibility for the cleanliness of the building and premises. In the case of a private dwelling it is obvious that it is more reasonable to hold the occupant responsible. This provision, however, must be read in connection with Section 145 which provides that if an occupant of a dwelling fails to comply with the provisions of the act he may be summarily evicted, in which event, the house being vacant, the health officer would look to the owner to clean up the unsanitary conditions before a new tenant is taken.

NOTE 2: It should be noted that in this section there is a detailed enumeration of all the various parts of the dwelling which are to be kept clean. While such enumerations are generally dangerous, this is safeguarded by adding the general "drag-net" provision at the end embracing every other part which may have been forgotten. There is a distinct advantage in this case in this detailed enumeration as it tends to indicate to the courts and to the enforcing officials the clear intent of the legislature.

NOTE 3: It would appear at first glance that the repetition of the words "and shall be kept" in the second line is unnecessary verbiage. This is not the case, and the insertion of these four words gives a totally different meaning to the provision than would be had if they were omitted. If omitted the section might be interpreted to mean that the dwelling shall be kept clean and free from any accumulation of dirt, filth, and so forth. This the court might hold to mean that accumulations should not be allowed. This is a very different thing from what is intended and what is said; namely, that all the parts of the building shall be kept clean and that in addition they are also to be kept free from accumulations of various kinds.

NOTE 4: There has been some doubt in the minds of owners and realtors in connection with this same provision in the earlier edition of the Model Law as to the division of responsibility between owner and occupier of various types of houses. For this reason, there has been added a provision which makes this clear beyond question.

§ 102. WALLS OF COURTS. In multiple-dwellings the walls of all courts, unless built of a light colored material, shall be thoroughly whitewashed by the owner or shall be painted a light color by him, and shall be so maintained. Such whitewash or paint shall be renewed whenever necessary, as may be required by the health officer.

NOTE: This requirement is for the purpose of improving the conditions of light in courts; it is also a sanitary measure, a coat of whitewash being a most effective agent in doing away with dirt and germs.

Explan-
ation

§ 103. WALLS AND CEILINGS OF ROOMS. In all multiple-dwellings the health officer may require the walls and ceilings of every room that does not open directly on the street to be kalsomined white or painted with white paint when necessary to improve the lighting of such room and may require this to be renewed as often as may be necessary.

Explan-
ation

NOTE: This is an important provision and is for the purpose of improving the lighting of rooms that are too dark, especially those in the older buildings. A coat of white paint on walls and ceilings will do wonders in lighting up a dark room. There are many basement rooms for which permits for human occupancy are denied because the rooms are too dark, the walls being painted the usual "tenement-house green," for which permits are ultimately granted when the walls are painted white; white paint does not absorb light as dark paint does and also radiates it more readily.

§ 104. WALL PAPER.¹ No wall paper shall be placed upon a wall or ceiling of any dwelling² unless all wall paper shall be first removed therefrom and said wall and ceiling thoroughly cleaned.

Explan-
ation

NOTE 1: This section does not prohibit the use of wall paper. From a sanitary point of view it would be desirable to make such a prohibition in the case of the homes of the poor, but this is not possible as tenants in high-class flats and apartments as well as in tenements desire to decorate their homes in this way. The section, however, does prohibit putting on any new wall paper over existing wall paper. While this adds materially to the cost of decoration of rooms, the effect of the enforcement of such a provision is to encourage the painting of walls—a much more sanitary method—and to discourage the use of wall paper. Wall paper is objectionable from two points of view; first, because disease germs which may have been deposited there under previous tenancy are thus given a long lease of life and may affect the health of new tenants. This is especially so in the case of tuberculosis. Wall paper is further

objectionable in the homes of the poor for the reason that it encourages vermin, as the sweet paste is especially agreeable to this form of insect life. In some cities as many as 13 layers of wall paper have been taken from one wall, and this not in a cheap tenement but in a high-class apartment house.

NOTE 2: Considerable opposition may develop to this requirement as involving unnecessary expense on the owner, and especially upon working people who own their homes and live in single-family dwellings. If it develops that this opposition is very strong, it would be wise to make a concession and to exclude private dwellings from the application of the section. In such event the following concession is suggested:

CONCESSION: Change the word "dwelling" to "multi-
ple-dwelling" Concession

NOTE 3: If very great opposition develops, it can do no great harm to omit the entire section, relying on the ability of the health officer to remedy any bad conditions that may arise under the general powers conferred upon him under Section 113.

§ 105. RECEPTACLES FOR ASHES, GARBAGE AND RUBBISH.¹ Suitable tight, non-absorbent receptacles² with covers, for holding ashes, rubbish, garbage, refuse and other waste matter shall be provided and maintained for every dwelling. In the case of private-dwellings and two-family dwellings such receptacles shall be provided by the occupants. In the case of multiple-dwellings of Class A each family shall provide its own receptacles, but the owner shall provide such general receptacles to receive such waste materials as may be necessary, located in some convenient place accessible to all the occupants of such dwelling. Wherever the owner of such multiple-dwelling provides individual receptacles for each apartment, it shall be the duty of the occupant of such to keep the receptacles used by him in a cleanly condition at all times. The construction and maintenance of garbage chutes³ and

bins⁴ is prohibited, but this shall not be construed as prohibiting garbage incinerators if properly constructed.

Explan-
ation

NOTE 1: No provision is more important than this if conditions of cleanliness are to be maintained in and around the dwellings of the poor. Where proper receptacles are not provided in which to put waste material so that this may be promptly removed by the city authorities, the result is that it is piled up in unsightly and disgusting heaps in the back yard, or in the cellar, or alley, or some part of the out-premises. In the case of most multiple-dwellings it is obvious that the responsibility should be placed upon the owner for the furnishing of these receptacles. In a private dwelling, however, the occupant has complete control over the dwelling and should provide them. Objection may be raised in some cities to this simple and elementary provision, claim being made that the metal cans which have been provided have been stolen by the tenants and sold for junk. The cases where this has happened are rare and the plea is not worthy of consideration. The answer to such a plea is that the landlord should get a different class of tenants.

NOTE 2: It is highly desirable that tight metal cans should be required. Wooden tubs, boxes, or barrels such as are frequently provided are unsanitary and are sure to result in the garbage and other refuse being distributed over the ground and premises. It is also of great importance that these cans shall be kept covered. The best type of can is one with a cover attached; that is, a hinged cover. This is not the usual type. Unless cans are kept covered cats and rats will feed upon their contents and distribute it over the premises. Flies also will swarm around it, thus increasing the fly nuisance and adding to the danger of transmission of disease.

NOTE 3: Garbage chutes are abominations. Intended originally as a convenience they have proved in practice to be nuisances because the garbage collects along the sides of the chute and gives rise to noxious odors.

NOTE 4: Garbage bins for the storage of garbage and other refuse material are equally objectionable, although it is the custom to have such bins in a num-

ber of cities. The idea of hoarding garbage and other refuse is repugnant to proper standards of sanitation. These waste products should be immediately removed from the premises and properly disposed of by the city authorities; it is certainly not desirable to keep such refuse in close proximity to the living quarters of the people.

§ 106. PROHIBITED USES.¹ No horse, mule, cow, calf, swine, sheep, goat, chickens, geese or ducks shall be kept in any dwelling or part thereof. Nor shall any such animal be kept on the same lot or premises² with a dwelling except under such conditions as may be prescribed by the health officer. No such animal, except a horse or mule, shall under any circumstances be kept on the same lot or premises with a multiple-dwelling.³ No dwelling or the lot or premises thereof shall be used for the storage or handling of rags⁴ or junk.

NOTE 1: It will not do to prohibit the keeping of all animals in a dwelling. People naturally desire to keep cats, dogs, and birds; but the undesirability of housing in the same building in which human beings reside any of the animals enumerated in this section is at once obvious and needs no supporting argument. All of the animals above mentioned have been found in the houses of the poor in different cities at various times.

Explanation

NOTE 2: When it comes to the keeping of these animals on the same premises with dwellings the question is different. In many of our cities, especially in the outlying sections, it will be very much desired to keep not only a horse but also cows and chickens and similar animals. So long as the conditions under which these animals are kept may be regulated by the health officer there is little likelihood of danger resulting.

NOTE 3: Animals should not however be kept on the same lot with a multiple dwelling. Such buildings are not a necessity in the undeveloped or rural portions of the community and therefore no hardship will result. Where multiple dwellings are built it means that many families or individuals will reside

on a given piece of land. It is distinctly unwise and injurious to permit the keeping of animals in close proximity to many people.

NOTE 4: The prohibition against rag shops and junk shops and the storage of such material either in dwellings or on the premises needs no argument. Such places are a potent source of contagious disease and a fire menace, and should be strictly limited to business quarters and even there kept under close observation and control at all times.

NOTE 5: The evil of tenement house prostitution is not so general throughout the country that it has seemed necessary or desirable to include in this section a prohibition against the use of any part of a multiple dwelling for such purposes. In New York and some of our Eastern cities which are distinctly tenement house cities this evil some years ago assumed such proportions that it became necessary to impose much stricter penalties for the committing of prostitution in buildings in which the respectable poor people dwell than attach to this offense in ordinary "houses of prostitution." While the evil is not widespread, it may develop at any time in any city and it can do no harm to embody in this law a provision dealing with this subject. If this is desired, the following variation is suggested. Add at the end of the section the following:

Variation

VARIATION: "No multiple-dwelling or the lot or premises thereof shall be used for purposes of prostitution or assignation."

§ 107. COMBUSTIBLE MATERIALS.¹ No dwelling, nor any part thereof, nor of the lot upon which it is situated, shall be used as a place of storage, keeping or handling of any article dangerous or detrimental to life or health; nor of any combustible article, except under such conditions as may be prescribed by the fire marshal² under authority of a written permit issued by him. No multiple-dwelling³ nor any part thereof, nor of the lot upon which it is situated, shall be used as a place of storage, keeping or handling of feed, hay, straw, excelsior, cotton, paper stock, feathers or rags.

NOTE 1: It will not do to prohibit outright the keeping of combustible articles, as this would prevent the reasonable storage of gasoline in a private garage at the rear of the lot behind a private dwelling. It would also prevent the sale of kerosene oil in a grocery store which might be located on the ground floor of an apartment house, or of benzine or alcohol in a drug store similarly located. It is essential, however, that the fire marshal should have authority to regulate and control the conditions under which such articles may be kept or stored.

Explana-
tion

NOTE 2: The fire marshal is the public official who will generally have jurisdiction over these matters. Where some other official has jurisdiction he should be substituted. In some cities the commissioner of public safety would be the appropriate person.

NOTE 3: It should be noted that a clear distinction has been made between conditions which may be permitted in private dwellings and two-family dwellings and those which are allowed in multiple dwellings. In the latter case an absolute prohibition is made against the storage, keeping, or handling of certain articles dangerous from the point of view of fire. In addition to this absolute prohibition, all multiple dwellings are also subject to the provisions of the first part of this section, which apply to all classes of dwellings, and are general in their nature.

§ 108. CERTAIN DANGEROUS BUSINESSES. There shall be no transom, window or door opening into a public hall¹ from any part of a multiple-dwelling where paint, oil, drugs² or spirituous liquors are stored or kept for the purpose of sale or otherwise.

NOTE 1: As the public halls and stairs in multiple dwellings are the danger point in case of fire, it is desirable to have no connection between them and stores in which such inflammable and explosive materials as paint, oil, drugs, or liquors are stored. The effect of this provision is to close the side door of the saloon where such side door leads into the tenement hallway. From a social point of view this is a distinct advantage. It also means that inside transoms or door openings must be filled in solid

Explana-
tion

with the same material as the partition. Locking the door or nailing the transom will not satisfy the requirements.

NOTE 2: It may be the part of wisdom to exempt hotels from this provision. Otherwise claim may be made that it would not be possible to have a bar such as is usually found in a hotel, nor a drug store, as communication between the bar and public rooms, and frequently the hall, is usually direct. While this claim may be readily met by a slight change in the plans,—it is possible to so arrange the bar that it will not communicate directly with the public halls and stairs,—the issue is not worth contending about. It is simpler to exempt hotels. The following concession is therefore suggested. Add at the end of the section the following:

Concession CONCESSION: "This provision shall not apply to hotels as defined in paragraph four of section two."

§ 109. JANITOR OR HOUSEKEEPER.¹ In any multiple-dwelling of Class A in which the owner thereof does not reside,² there shall be a janitor, housekeeper or other responsible person who shall reside in said house and have charge of the same, if the health officer shall so require.³

**Explan-
ation**

NOTE 1: This is one of the important provisions of the act from a sanitary point of view. In tenements where there are many families, unsanitary conditions are bound to result if there is not some one living on the premises who is responsible for the maintenance of the public parts of the building—the halls, stairs, water-closets, and the out-premises. What is everybody's business is nobody's business, and individual tenants will feel no responsibility for the public parts of the building nor can they properly be held responsible.

NOTE 2: It should be noted that the requirements of this section will be fulfilled if some one of the tenants is designated by the owner as janitor or housekeeper. Exception is made in the case in which the owner resides in the house because in that case he will look after its condition far better than any janitor.

NOTE 3: In some cities an attempt is made to establish in the law a definite standard by the number of families in the house and to require a janitor on the premises in all cases where there are that many families or more. It is thought better, owing to the varying conditions which prevail in most communities, to leave this to the discretion of the health officer, who will have to answer to the public if unsanitary conditions exist and he has not required a resident janitor on the premises.

§ 110. OVERCROWDING.¹ If any room in a dwelling is² overcrowded the health officer may order the number of persons sleeping or living in said room to be so reduced that there shall be not less than SIX HUNDRED cubic feet³ of air to each adult and FOUR HUNDRED cubic feet of air to each child under twelve years of age occupying such room.

NOTE 1: This is a very different provision from the one found in the laws of many American cities to the effect that no matter what the conditions, no room shall have less than 400 cubic feet of air space for each adult. To require arbitrarily that no room shall contain less than a certain amount of cubic air space for each occupant is to bring about in some cases unreasonable and absurd situations.* It is very doubtful whether a requirement of that nature if contested could be sustained as a reasonable exercise of the police power. The number of cubic feet of air space is not the sole standard as to the fitness of a room for human occupancy. In fact it is of comparatively minor importance in comparison with other elements. The character of the air, the frequency of its renewal, the opportunity for "through" ventilation, the reduction of high temperature, are the important things in room ventilation. The question of reducing the number of occupants of a room is a matter which necessarily must be left to be determined by the health officer upon the conditions found in individual rooms, which vary greatly. One room may be small, dark, and unventilated; another large and with good light and ventilation. A "room"

Explanation

* For further discussion, see Housing Reform, pp. 29, 30.

has not as yet been standardized. The scheme of this section, therefore, is to leave entirely to the health officer the power to reduce the number of occupants in a room so that there shall not be more than a proper number.

NOTE 2: It should be observed that this power can only be exercised if the room is actually overcrowded. This at once becomes a question of fact and enables the owner to go into court and establish whether his room is overcrowded or not, with the burden of proof upon the health officer to show that the room is overcrowded. This is as it should be. It is an extreme power and should not be exercised unless the health officer can clearly demonstrate to the satisfaction of fair-minded people that the conditions are such as to warrant action.

NOTE 3: Numerous opponents of housing reform who will not read the law carefully will assume that this provision, because it mentions a certain number of cubic feet, is similar to the provision found in other laws with which they are familiar, and will oppose this on the ground that this is a more stringent regulation than is found in most laws, which as a rule call for 400 cubic feet of air space for each adult and 200 for each child under twelve years of age. It is important to make plain to such persons the points in which this provision differs from the requirements that have been customary in previous laws, as above set forth.

§ 111. LODGERS, ROOMERS AND BOARDERS PROHIBITED.¹

The health officer may prohibit in any² multiple-dwelling the letting of lodgings therein, and may prescribe conditions³ under which lodgers, roomers or boarders may be taken⁶ in multiple-dwellings. Where lodgers, roomers or boarders are permitted to be taken, the health officer shall issue a written permit to that effect and shall keep an accurate public record of all such permits with all necessary detailed information as to size of rooms, their adequacy, the number of roomers or lodgers permitted and so forth. It shall be the duty of the owner⁴ of all multiple-dwellings to see that the requirements of the health officer in this regard are at all times complied with, and a failure

to so comply on the part of any tenant or occupant after due and proper notice from said owner, shall be deemed sufficient cause for the summary eviction of such tenant or occupant, and the cancellation of his lease. The provisions of this section may be extended to private-dwellings and two-family dwellings, as may be found necessary by the health officer.⁵

NOTE 1: The evil of Room Overcrowding discussed under the preceding section is almost invariably wrapt up with the practice of taking in roomers, lodgers or boarders. Strangely enough, though the connection between this housing evil and diseases of certain kinds—viz., all “contact diseases” such as Influenza, is very close and has been clearly established to the satisfaction of the medical authorities, yet the fact remains that this is the one serious phase of bad housing that has never had satisfactory treatment in America. This situation has not been due so much to lack of knowledge of the facts or appreciation of the serious consequences of such conditions as it has to an unwillingness on the part of public officials to take up a cause which is so unpopular with all classes in the community affected by it, and for which there is so little popular support. Explanation

The roomer who finds a comfortable home at comparatively low rates certainly does not want a law that deprives him of this; the tenant or occupier of a house or flat who by taking in roomers augments his income does not want a law that deprives him of that income; and finally, the owner of dwelling house property who can get a greater rental for it, because his tenant takes in roomers does not want a law that deprives him of that increased rental. Thus, we see that the three classes in the community most closely affected by such legislation have strong personal and financial incentives to oppose its passage and resist its enforcement.

But the community has a most important interest in such legislation. For its own protection, its own health, its own welfare, it is essential. Unfortunately the only people who want it, as a rule, are a few “cranks,”—public health officials, social workers and housing reformers, and similar socially minded per-

sons. Their task should be to inform the general public as to how this concerns them, so that what affects the welfare of the whole community may outweigh in the minds of legislative bodies and enforcing officials and local minor courts the opposition of selfish interests that may be adversely affected. The recent nation-wide Influenza epidemic should be a potent weapon in driving this idea home.

NOTE 2: This provision applies to *all* multiple dwellings,—those of Class B as well as Class A. It therefore affects lodging houses, hotels, boarding houses and similar buildings where the chief purpose is the taking in of lodgers, roomers and boarders. This is deliberate. For, buildings of this class should be required to take out permits, and should be operated under the strict supervision and control of the sanitary authorities, sometimes of the police authorities as well. This should not be deemed a hardship, as lodging houses and hotels in most cities are now under this necessity.

NOTE 3: Complete prohibition of taking lodgers or roomers in dwellings is, of course, out of the question. It would probably be held to be unconstitutional, even if it were desirable. The best that can be done, therefore, is to vest in some public official the power to set up the conditions under which the practice may safely be followed. This will allow the health officer to permit it, where rooms are light and well ventilated, and there is no overcrowding, and to forbid it where rooms are only sufficient for the needs of the family occupying them. The section contemplates the granting of a written permit by the health officer in cases where lodgers are permitted, and the keeping of full and complete records relative thereto.

NOTE 4: Earlier laws have placed the responsibility solely upon the tenant. It has been largely because of this that such efforts at legal regulation have failed, as the courts have been unwilling to hold as criminal offenders the poor foreigners among whom this practice chiefly prevails, and who always plead poverty and ignorance when brought into court. It is significant that the only two instances in which an effort is made to hold the tenant responsible for violation of the law, namely, in the case of room overcrowding and the placing of encumbrances upon fire-escape balconies, are the only

provisions of our tenement laws which have proved unenforceable and have baffled the health officers of all our cities. Whereas the other sections of the law where the owner is held responsible, have always been found to be capable of proper enforcement. This section deliberately places the responsibility upon the owner in the case of multiple dwellings for the presence in his house of lodgers and boarders in the individual apartments of the tenants. It will be claimed by some that it is unreasonable to hold the owner responsible in this way and that he cannot know of the presence of outsiders in the families to whom he has rented his apartments. This is plausible but not sound. Where there is a janitor on the premises, and there should be one in the case of all tenement houses, the class of buildings in which this evil is chiefly found, the janitor always knows whether the tenants are taking in lodgers or boarders. Just as it has been found practicable in the New York law to hold the owner responsible for the moral character of his tenants and make him liable for a penalty of \$1,000 for a failure to evict prostitutes, so it is equally practicable to make him responsible for room overcrowding. A full discussion of this subject and the methods under which this provision would work will be found in a paper on Room Overcrowding, in *Housing Problems in America*.*

NOTE 5: This provision is a radically different one from the similar section found in the first edition of this book published five years ago. There, a scheme was outlined which prohibited the letting of lodgings in every class of dwelling, including private-dwellings, without obtaining a written permit from the health officer. This put the burden of responsibility upon the occupiers of all dwellings, even in cases where the taking of roomers was entirely permissible. It was too great a burden and was resented by the majority of people as an undue interference with their private affairs. It was somewhat like "burning down the barn in order to have roast pig." While it was granted that it was right and proper that the health officer should be able to control conditions where foreigners take in 6 or 8 lodgers in one room, it was felt that to

* *Housing Problems in America*, Vol. II, pp 58-78. New York, National Housing Association Publication, 1912.

have the health officer determine in every case whether or not one might be permitted to take a roomer into a private dwelling was going too far.

For these reasons the section deals primarily with multiple dwellings, where as a rule the evil is greatest, but permits the health officer to extend its application to private dwellings and two-family dwellings when necessary.

From an administrative point of view, the change over the provisions contained in the first edition of this book is a most important one. The health officer instead of having to inspect *every* dwelling in the city and determine whether it is suitable for the taking in of lodgers, need now deal only with those cases where bad conditions arise and *as* they arise.

NOTE 6: Persons who are seeking to oppose the law may raise the question that the provisions of this section will prohibit some friend from visiting them. This is a fanciful and strained construction. No court or public official will take such a position for a moment. What the section does is to prohibit the taking of outsiders to live in the family as a business for which compensation is had.

§ 112. INFECTED AND UNINHABITABLE DWELLINGS TO BE VACATED.¹ Whenever it shall be certified² by an inspector or officer of the health department that a dwelling is infected³ with contagious disease, or that it is unfit for human habitation, or dangerous to life or health by reason of want of repair, or of defects in the drainage, plumbing, lighting, ventilation, or the construction of the same, or by reason of the existence on the premises of a nuisance likely to cause sickness among the occupants of said dwelling, or for any other cause, the health officer may⁴ issue an order requiring all persons therein to vacate⁵ such house within not less than TWENTY-FOUR HOURS nor more than TEN DAYS for the reasons to be mentioned in said order. In case such order is not complied with within the time specified, the health officer may cause said dwelling to be vacated. The health officer whenever he is satisfied that the danger from said dwelling has ceased to exist, or that it is fit for human habitation,

may revoke said order or may extend the time within which to comply with the same.

NOTE 1: This section is one of the most important sections in the whole law. It gives the health department under proper conditions the right to vacate any house which is unfit for human habitation and to keep it vacant until it is made fit; and permits this without application to the courts. The health department can send its own officers or can call upon the police department to furnish policemen and send them to the house, if its orders are not complied with, and turn the tenants into the street and keep them out. This is done every month in New York City and is the only effective method of dealing with extreme cases. It is an extreme power which should be used only where conditions clearly warrant it. Explan-

NOTE 2: Before such action is taken formal certification must be made by an officer of the health department reciting the conditions which exist; such certification should be filed before the action is taken and should be a public record of the department.

NOTE 3: The various reasons which warrant the vacation of a house are carefully enumerated:

1. If the house is infected with contagious disease. This does not mean the mere presence of one case of tuberculosis in the house; it would be necessary to show that the house itself was infected.

2. If it is unfit for human habitation for any reason whatever.

3. If it is dangerous to life or health for various reasons, namely, want of repair, defects in drainage, plumbing, lighting, ventilation or construction; or if it is dangerous to life or health because of a nuisance on the premises likely to cause sickness among the occupants. This does not mean that the house can be vacated because of the mere presence of a nuisance. The nuisance must be one that is likely to cause sickness among the occupants of the dwelling, and the health officer must be able to show that the house is dangerous to life or health by reason of this state of affairs.

4. Finally, if the house is dangerous to life or health for any cause in addition to those enumerated, the health officer may vacate it.

NOTE 4: It should be carefully observed that this is a power given to the health officer to be exercised in his discretion. Some housing reformers want this provision made mandatory so as to require the health officer to vacate houses in every case whenever a report is made to him along these lines by an employee of the department. Such a provision would be unwise and dangerous. It would place in the hands of subordinate employees tremendous power and open the door for unlimited graft. As this power is an extreme one it should be scrutinized with the greatest care and be safeguarded so as to prevent abuse. Reports of this kind made by subordinates should be verified in each case personally by the head of the department before vacating a house. This should be an invariable rule; it is wise policy also to take photographs of the bad conditions.

NOTE 5: Attention is called to the fact that this provision authorizes the health officer to vacate a house summarily without court proceedings. This is what is intended. In many communities it will seem an extreme and unusual power. It is, however, essential. In cases where unsanitary conditions are allowed to exist for long periods of time no other remedy will bring those responsible to terms. In some cities it may be necessary to permit owners to have the right of appeal to the courts. From a practical point of view this is highly undesirable. It may, however, in a few states be a legal necessity.

NOTE 6: In exercising the power to vacate houses the health officer should be careful not to put the tenants out of the building just after they have paid their month's rent in advance. The vacation proceedings should be timed with reference to this so that unnecessary hardship and confiscation of poor people's property will not be involved. Similarly care should be taken not to vacate houses in extreme winter weather as by postponing the order this hardship would not be encountered. Persons are cautioned against making any change in the phraseology of this section. It is of vital importance to keep it exactly as it is, as it has stood the test in some of our Eastern cities of over thirty years' practice.

any dwelling or any building, structure, excavation, business pursuit, matter or thing, in or about a dwelling, or the lot on which it is situated,² or the plumbing, sewerage, drainage, light or ventilation thereof, is in the opinion of the health officer in a condition or in effect³ dangerous or detrimental to life or health, the health officer may declare that the same to the extent he may specify is a public nuisance, and may order the same to be removed, abated, suspended, altered or otherwise improved or purified as the order shall specify. In addition to the above powers⁴ the health officer may also order or cause any dwelling or excavation, building, structure, sewer, plumbing pipe, passage, premises, ground, matter or thing, in or about a dwelling, or the lot on which it is situated, to be purified, cleansed, disinfected, removed, altered, repaired or improved. If any order of the health officer issued under the authority of the provisions of this act is not complied with, or so far complied with as he may regard as reasonable, within five days after the service thereof, or within such shorter time as he may designate, then such order may be executed⁵ by said health officer through his officers, agents, employees or contractors.

NOTE 1: This section is of almost equal importance with the previous section. It greatly supplements it as well as the general powers possessed by health departments with reference to nuisances. The section is necessary because there are often cases where there are conditions in a house which do not make it unfit for human habitation, bad though they are, and which even perhaps do not in themselves constitute a nuisance in the usual acceptance of that term, but which should be remedied and remedied promptly. Many of these instances it is not possible to anticipate in drafting a law and it is necessary, therefore, to have this general "drag-net" power conferred upon the health department. Take the case, for instance, where in the winter time most of the panes of glass are out of the windows in an individual apartment in a tenement house. The health officer could with difficulty prove that the house was unfit for human

Explana-
tion

habitation because of this condition. It would similarly be difficult to establish the condition as a nuisance, yet it is obvious that the condition should be remedied and that the effect of it upon the people living in such rooms is bound to be injurious to health. There are no provisions in the act outside of the general powers conveyed by this section which would warrant the health officer in requiring these window panes to be made whole. If it were attempted under the authority of Section 97, which requires that the dwelling shall be kept in repair in all its parts, and an order issued to repair the window panes, the owner could evade compliance by removing all glass from the sash. There could then be no question of "repair" involved. Other instances will readily occur to the reader.

NOTE 2: The powers herein conferred are intended to apply to all of the conditions which may exist not only in the dwelling itself but those on the same lot or in connection with it. Every board of health should of course have similar powers with regard to all classes of buildings, but this act concerns itself only with dwellings.

NOTE 3: The phrase "in a condition or in *effect* dangerous to life or health" is of importance, as the words "in effect" will also provide for potential evils as well as actual ones.

NOTE 4: The second sentence of this section, "The health officer may also order," confers broad powers upon the health officer to require practically any improvement to an existing dwelling which in his opinion is appropriate. The word "also" is essential in this sentence. Without it there is danger that the courts might construe this sentence as explanatory or further illustrative of the powers conferred in the first sentence, whereas it is intended by this provision to confer additional powers.

NOTE 5: It will be observed that power is conferred upon the health officer to execute his own orders and have the work done if the owner fails to comply within a reasonable time. This should be read in connection with the latter part of Section 144 where general power to execute his own orders is conferred upon the health officer.

§ 114. FIRE-ESCAPES. The owner of every multiple-dwelling on which there are fire-escapes shall keep them in good order and repair, and whenever rusty shall have them properly painted with two coats of paint. No person shall at any time place any incumbrance of any kind before or upon any such fire-escape.

§ 115. SCUTTLES, BULKHEADS, LADDERS AND STAIRS. In all multiple-dwellings where there are scuttles or bulkheads, they and all stairs or ladders leading thereto shall be easily accessible to all occupants of the dwelling and shall be kept free from incumbrance and ready for use at all times. No scuttle and no bulkhead door shall at any time be locked with a key, but either may be fastened on the inside by movable bolts or hooks.

NOTE: Lives are frequently lost in fires, especially in tenement houses, because when the occupants attempt to escape to the roof through the scuttle or bulkhead they find the scuttle nailed down or the bulkhead door locked and the key in the janitor's pocket. They then become trapped in the top-floor hallway and lose their lives. It is essential, therefore, that scuttles should be so arranged that they can be easily raised by the tenants in case of fire and that bulkhead doors shall be kept unlocked. There must, however, be some means of fastening them, otherwise thieves can get in from the outside and rob the tenants. A movable bolt or a hook will be found to be an adequate means of fastening the scuttle or door to keep intruders out, and will permit the immediate opening of the door from the inside in the event of fire.

Explan-
ation

ARTICLE V

IMPROVEMENTS

In this article will be found those improvements in the older buildings required as a matter of compulsory legislation.

§ 120. ROOMS, LIGHTING AND VENTILATION OF.¹ No room in a dwelling¹¹ erected prior² to the passage of this act shall hereafter be occupied for living purposes unless it shall have a window of an area of not less than EIGHT square feet³ opening directly upon the street, or upon a⁴ rear yard not less than TEN feet deep, or above the roof of an adjoining building, or upon a court or side yard of not less than TWENTY-FIVE square feet in area, open to the sky without roof or skylight, unless such room is located on the top floor⁵ and is adequately lighted and ventilated by a skylight opening directly to the outer air. Except that a room which does not comply with the above provisions may be occupied if provided with a sash window⁶ of not less than fifteen square feet in area, opening into an adjoining room in the same apartment, group or suite of rooms, which latter room either opens directly on the street or on a rear yard of the above dimensions, or itself connects by a similar sash window or series of windows with such an outer room. Said sash window shall be a vertically-sliding pulley-hung⁷ sash not less than three feet by five feet between stop-beads,⁸ both halves shall be made so as to readily open,⁹ and the lower half shall be glazed with translucent glass,¹⁰ and so far as possible it shall be in line with windows in the said outer room opening on the street or rear yard so as to afford a maximum of light and ventilation.

NOTE 1: This provision is an attempt to deal in a practical way with dark, unventilated rooms in existing houses. In effect it means that every room in an existing house shall either have a window to the outer air, namely, the street, yard, or a court of a certain size, or shall have a large window communicating with an adjoining room in the same apartment, thus securing some improvement in the existing conditions of light and ventilation. The ideal thing to do would be to prohibit the use of any room for living purposes which does not have a window directly on the outer air, but this is not practicable. Such rooms will be found in varying numbers in different localities, in buildings erected at different times and in accordance with the laws which were in force and effect when the houses were built. In many cases it is physically impossible to provide a window to the outer air in such rooms without tearing down the building. The courts would probably hold such a requirement to be confiscatory and void. The provision of this section is not subject to that objection and is a reasonable requirement.

Explana-
tion

NOTE 2: This section applies only to methods of lighting and ventilating rooms erected prior to the passage of the act. Rooms in dwellings erected subsequent to the passage of the act must conform to the requirements of Article 11 dealing with new buildings.

NOTE 3: Every variety of condition will be found in existing dwellings. Some rooms will be found which have windows to the outer air but the windows do not contain 8 square feet in area. In such cases all that will be necessary will be to enlarge the windows.

NOTE 4: It should be noted that if the room opens on a yard or court on the adjoining premises, so long as that yard or court is not built up and it is of the size prescribed by the act, it is a satisfactory compliance with the terms of this section, as all that is sought is to see that dark rooms in the older dwellings shall be made light and shall have as much ventilation as possible. In some cases rooms will be found which have windows opening to the rear yard but the yard will be smaller than 10 feet in depth. In such cases a sash window must be provided in the partition leading to the adjoining room. Similarly exist-

ing rooms may open on courts smaller in size than 25 square feet in area or courts which are covered over at the top. In the latter case the room can be made legal by removing the covering at the top and having the court open to the air or by providing a sash window in the partition leading to the adjoining room.

NOTE 5: In the case of rooms on the top floor which

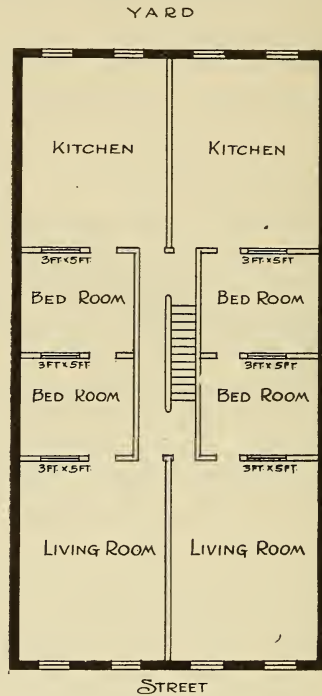


FIGURE 38

SASH WINDOWS PROVIDED BETWEEN ROOMS

are now dark and unventilated, the simplest and easiest way to remedy the conditions is to provide ventilating skylights in the different rooms. This can be done at comparatively slight expense.

NOTE 6: In any event, no matter what the conditions or difficulties it is always practicable to cut a window in the partition separating the inner or dark room from the room next adjoining, which in most

cases will be a room that opens directly on the outer air. Sometimes the inner room is two or three rooms removed from the outer wall of the building. In that case there must be a series of windows in line with each other leading from the inner room to the outer room so that the light and air may penetrate to the room in question, as indicated in the diagram on the preceding page.

NOTE 7: The reason for requiring the sash window in the partition to be a double-hung sash is because a hinged window under such circumstances is apt to be broken and will therefore generally be nailed up in the cheaper class of houses, thus defeating the plan to improve the ventilation of the inner room. The double-hung sash will also insure better circulation of the air, as by utilizing it properly it can be kept open both at top and bottom with the window acting as a diaphragm, dividing the air currents.

NOTE 8: The requirement that the window shall not be less than 3 feet by 5 feet is to insure a window of sufficient size to admit enough light and air. A larger window than this, wherever it is possible to get it, is very desirable.

NOTE 9: The law will not be complied with by removing the partition between the inner room and the room next adjoining and making one room out of the two. This is objectionable and should be prevented, as it means that the inner room will be used as an alcove and that a curtain will presumably be used between the two rooms shutting out both light and air. The evils of the alcove room have been fully discussed under Section 35.

NOTE 10: The requirement that the lower half of the window shall be glazed with translucent glass is for the purpose of privacy, thus removing the objection which would otherwise be raised that persons could not undress in their bedrooms without being seen in the outer room.

NOTE 11: This section applies to all classes of dwellings. It may be objected to by the owners of private houses. A dark room in a private dwelling, however, is just as dangerous as in a multiple dwelling. The effect of dark rooms on tuberculosis germs is the same in all cases. If, however, the opposition to this provision seems serious and it is desired to make con-

cessions to these interests, the following concession may be made. Substitute for the following words at the beginning of the section, which now read "No room in a dwelling erected prior," the following words:

Concession CONCESSION: "No room in a two-family dwelling or in a multiple-dwelling of Class A erected prior"

§ 121. PUBLIC HALLS AND STAIRS, LIGHTING AND VENTILATION OF.¹ In all multiple-dwellings erected prior to the passage of this act the public halls and stairs² shall be provided with as much light and ventilation to the outer air as may be deemed practicable by the health officer, who shall order the cutting in of windows and skylights and such other improvements⁴ and alterations in said dwellings as in his judgment may be necessary and appropriate to accomplish this result. All new³ skylights hereafter placed in such dwellings shall be provided with ridge ventilators having a minimum opening of FORTY square inches and also with either fixed or movable louvres or with movable sashes; all such skylights and windows shall be of such size as may be determined to be practicable by said health officer.

**Explana-
tion**

NOTE 1: The evils of dark public halls and stairs have already been fully set forth from the point of view of sanitation, fire danger and morality. This section is enacted for the purpose of bringing as much light and air as possible into the existing dark public hallways. The conditions vary so greatly in each building that it is not practicable to attempt to lay down in the act a definite, rigid method by which this shall be accomplished in all cases. In some cases it may be by the cutting in of a window to the street or yard, in others to the yard of an adjoining building; while in many others the only improvement that can be had will be by means of a ventilating skylight in the roof. What the section does is to give to the health authorities the power to improve in every way practicable the lighting and ventilation of these existing public hallways.

NOTE 2: This section applies only to *public* halls

and stairs. It will therefore not apply in the case of private dwellings and two-family houses.

NOTE 3: The requirement with regard to the construction of skylights does not apply to existing skylights but only to a new one which may be placed in the hallway of an existing dwelling. The size of the skylight will consequently vary with the conditions in each building. There is no advantage in requiring a large skylight where there is a small stairwell or no well. Under such circumstances this would light only the hall on the top floor.

NOTE 4: A simple and inexpensive way of materially improving the conditions of light in the dark halls is to remove the wooden panels in the doors leading from the individual apartments to the halls and substitute ground glass or wire-glass panels in their place. While this does not make the halls light it does make them much lighter. It has not been thought wise to require this alteration as a matter of mandate, but for the reason set forth in Note 1 it has seemed best to leave this to the health officer as one method to employ where it proves to be advantageous.

§ 122. SINKS AND WASH-BASINS. In all dwellings² erected prior to the passage of this act, when deemed necessary by the health officer, the woodwork¹ enclosing sinks and wash-basins shall be removed and the space underneath shall be left open. The floor and wall surfaces beneath and around them shall be put in good order and repair, and if of wood shall be kept well painted with light-colored paint.

NOTE 1: This is a requirement compelling the removal of all enclosing woodwork from sinks in existing dwellings. It is necessary because where sinks are thus enclosed, the woodwork as a rule becomes saturated with water and slops and is a harboring place for dirt, vermin and disease germs. Moreover, if the plumbing is defective and is enclosed the defects are not observed. In order to show up accumulations of dirt and filth underneath them it is wise to require the floor to be painted white.

Explan-
ation

NOTE 2: Objection will probably be made to this

provision so far as it applies to private dwellings and two-family houses. The owners of such houses may object strenuously to the whole provision. Special objection will undoubtedly be raised to its application to butler's pantries in private dwellings and two-family dwellings, where the butler's pantries have hardwood floors and the sinks are nicely cased in with hardwood casing well varnished. Painting such floors with white paint would be quite inappropriate. All that it is sought to reach are the bad conditions described in Note 1, and which as a rule are found only in the dwellings of the poor. It is therefore left to the health officer to determine when such alterations are necessary.

§ 123. WATER-CLOSETS. In all dwellings erected prior to the passage of this act, the woodwork enclosing all water-closets shall be removed from the front of said closets, and the space underneath the seat shall be left open. The floor or other surface beneath and around the closet shall be put in good order and repair and if of wood shall be kept well painted with light-colored paint.

Explana-
tion

NOTE: This is a similar provision and is necessary for the reasons discussed in the preceding section. The necessity for it, of course, is greater in the case of water-closets than it is in the case of sinks. The objections which pertain to the previous section do not obtain here. For this reason, the requirement is made a mandatory one and is not left to the discretion of the health officer.

§ 124. PRIVY VAULTS, SCHOOL-SINKS AND WATER-CLOSETS.^{1,2} Whenever a connection with public water-mains becomes reasonably accessible as provided in section nine of this act, all³ privy vaults, school-sinks,⁷ cess-pools or other similar receptacles used to receive fecal matter, urine or sewage, shall before January first, nineteen hundred and —, ⁴ with their contents, be completely removed and the place where they were located properly disinfected under the direction of the health officer. Such appliances shall be replaced by individual water-closets of

durable non-absorbent material, properly connected to a public sewer, if a public sewer is reasonably accessible as defined in section nine of this act; if there is no such public sewer reasonably accessible, then such water-closets shall be properly connected to a cesspool, septic tank or other similar device as provided in section nine of the act. All such water-closets shall be of modern sanitary type, and with individual traps, and properly connected flush tanks providing an ample flush of water to thoroughly cleanse the bowl. Each such water-closet shall be located inside⁵ the dwelling or other building in connection with which it is to be used, in a compartment completely separated from every other water-closet, and such compartment shall contain a window of not less than FOUR square feet in area opening directly to the street, or rear yard or on a side yard or court of the minimum sizes prescribed in sections twenty-two, twenty-three, twenty-four and twenty-five of this act. The floors of the water-closet compartments shall be as provided in section forty-seven of this act. Such water-closets shall be provided in such numbers as required by section ninety-three of this act. Such water-closets and all plumbing in connection therewith shall be sanitary in every respect and, except as in this act otherwise provided, shall be in accordance with the local ordinances and regulations in relation to plumbing and drainage.⁶ Pan, plunger and long hopper closets will not be permitted. No water-closet shall be placed out of doors.

NOTE 1: This is the most important provision that can be enacted with regard to the improvement of the older buildings. It is one which will as a rule create much opposition, as it involves owners in considerable expense; yet all cities should unhesitatingly enact it. It requires existing privy vaults, whether sewer-connected or not, and all similar receptacles to be done away with within a certain time, preferably a year, and new modern sanitary water-closets installed inside of the building in their place.

Explana-
tion

There is a very material difference between this

requirement and the one found in the same section of the first edition of this book and in most of the laws that have been enacted since 1914 and which have been based upon it. There, the removal of these nuisances was required only where a sewer connection was possible. In this revised provision, this is required just as soon as there is a communal water-supply. For further discussion of this subject see Section 9, Note 2.

NOTE 2: The constitutional question may be raised with regard to this requirement but cities can adopt it with perfect confidence that they are on safe ground. The question has been settled for all time. A similar provision was put into effect in New York City in 1901. Its constitutionality was tested and the case went through all the courts of the state and ultimately went to the Supreme Court of the United States. The law was uniformly sustained in each of these courts. (*Tenement House Department vs. Moeschen*, 203 U. S. 583.)

NOTE 3: It should be noted that the provision as herein stated applies to all privy vaults in the city, whether they are used in connection with dwellings, or commercial buildings, or in any other way. This is for the reason that there is no way otherwise to safeguard the members of the community living in residential sections from the danger of infection through the medium of the house-fly. For further discussion see Note 10 under Section 47.

NOTE 4: It is only proper to allow owners a reasonable time in which to make this alteration. It involves in some cases the preparation of plans by an architect and structural alteration of the building. It also involves in all cases expense to the owner. In most communities it is the custom to allow one year's time in which to make these changes. The method of expressing this as adopted in this section is one that should be observed. It should be noted that the requirement is that these vaults shall be removed *before* a certain date. This does not prohibit the removal of them at an earlier date if the health authorities require it. They should be free to require it. In this connection see Section 11. There may be circumstances where it is necessary to require the removal of such vaults in a less time than one year.

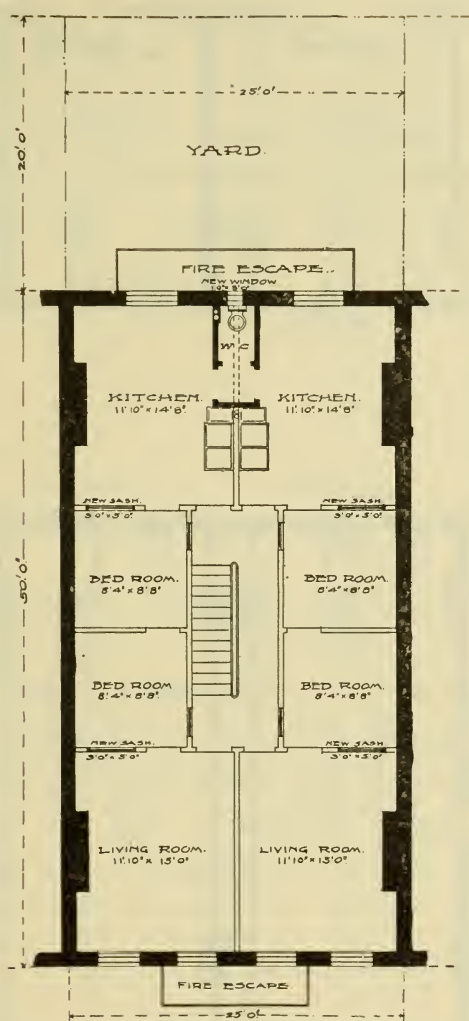


FIGURE 39
 PUTTING WATER-CLOSETS INSIDE THE HOUSE BETWEEN TWO FLATS
 IN A FOUR-ROOM DEEP HOUSE

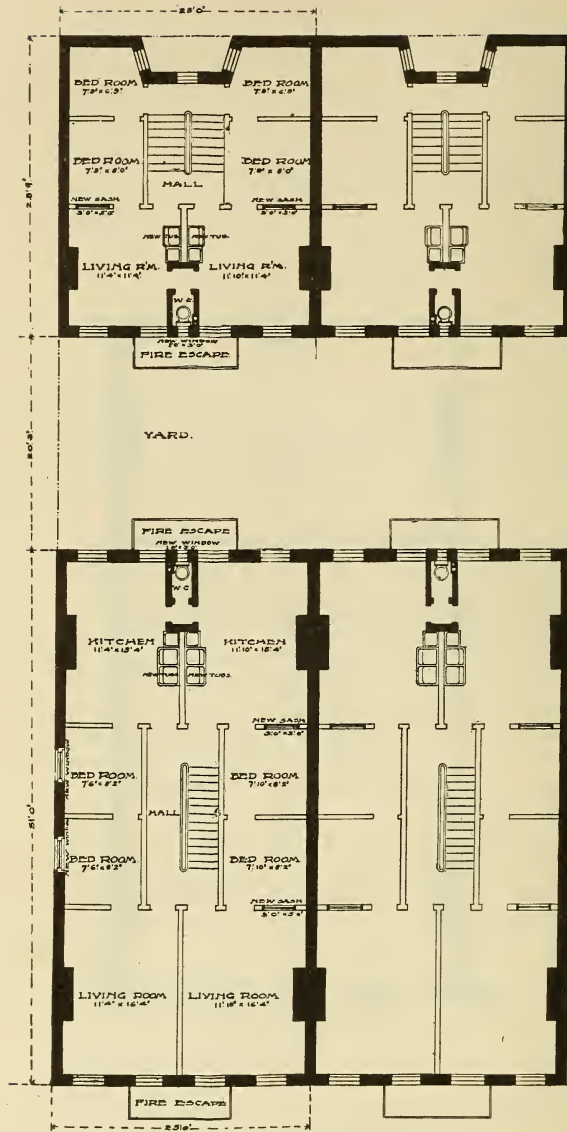


FIGURE 40
PUTTING WATER-CLOSETS INSIDE THE HOUSE BETWEEN TWO FLATS
IN A FRONT AND REAR HOUSE

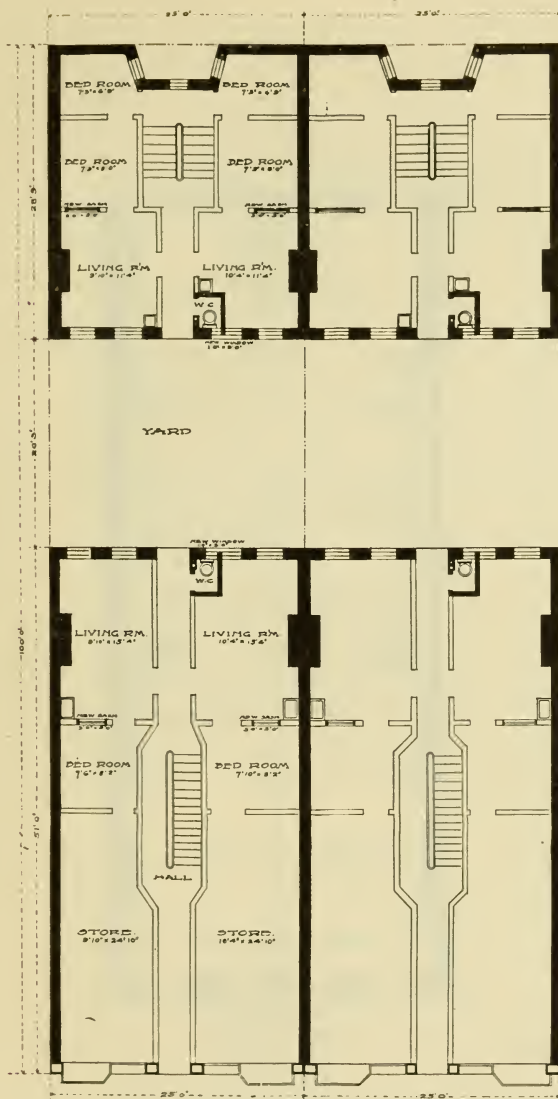


FIGURE 41
PUTTING WATER-CLOSETS INSIDE THE HOUSE OFF THE PUBLIC HALL
PLAN OF ENTRANCE FLOOR

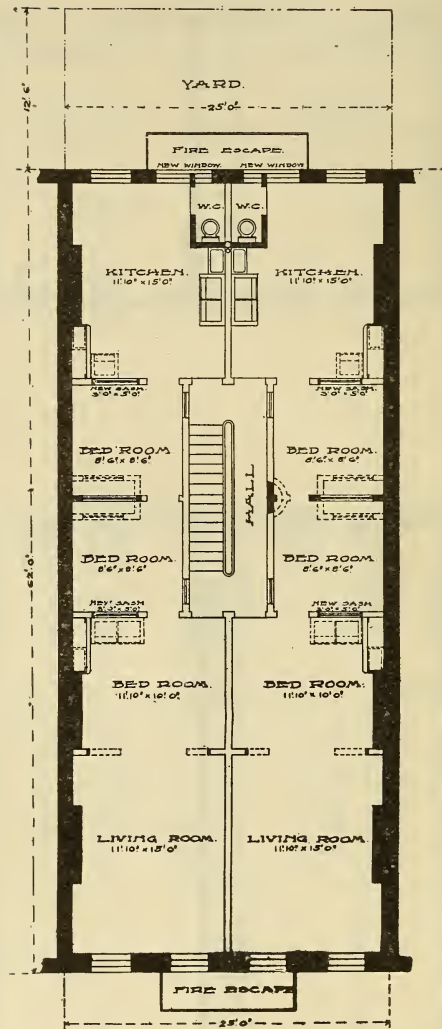


FIGURE 42
PUTTING WATER-CLOSETS INSIDE THE HOUSE, TWO FIXTURES PER FLOOR

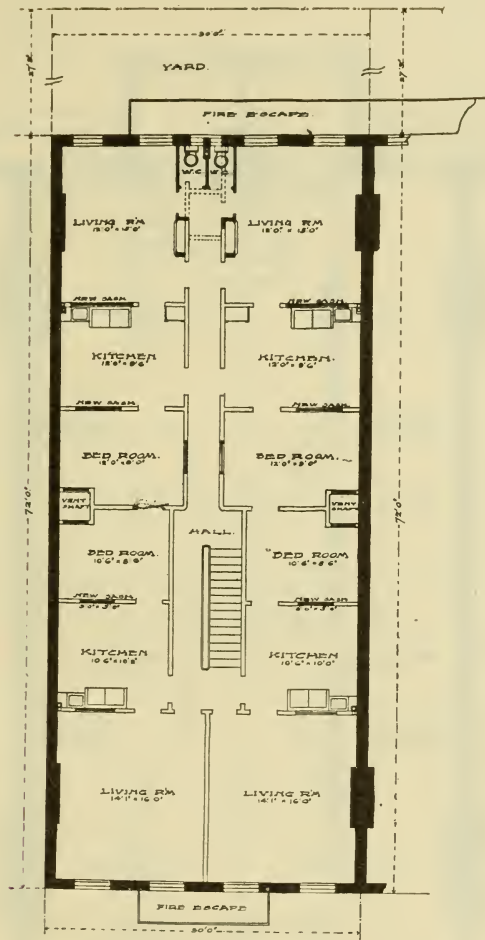


FIGURE 43
PUTTING WATER-CLOSETS INSIDE THE HOUSE IN A FOUR-FAMILY ON A
FLOOR FLAT
Two water-closets off the public hall

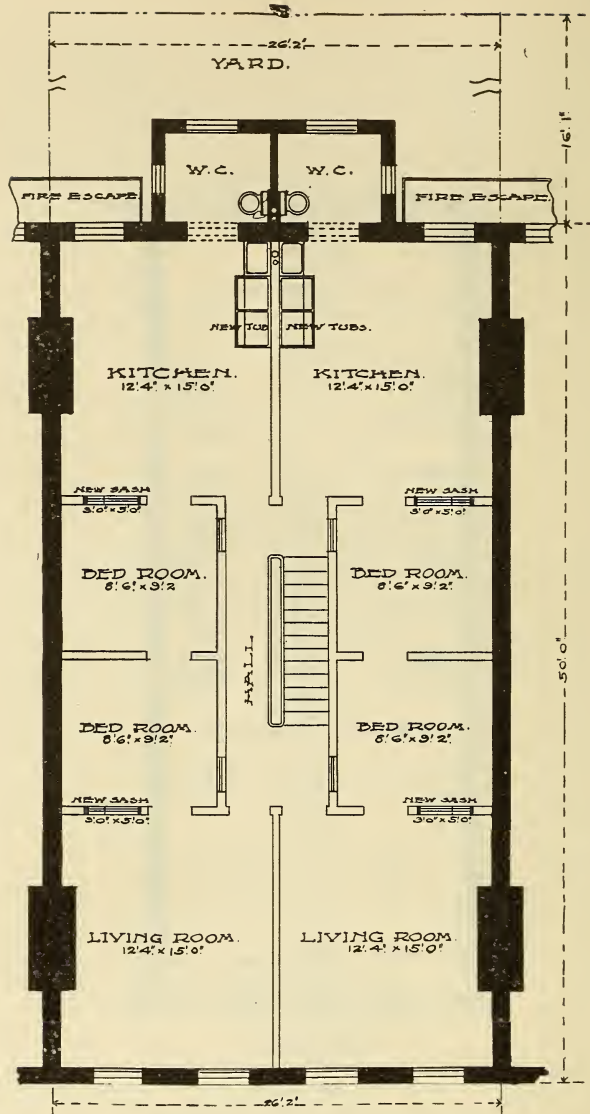


FIGURE 44
PUTTING WATER-CLOSETS INSIDE THE HOUSE
Building an extension for them at the rear

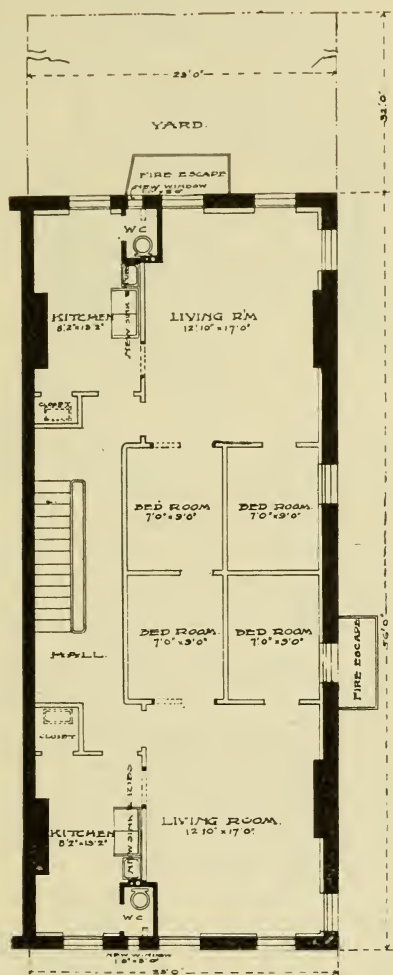


FIGURE 45

PUTTING WATER-CLOSETS INSIDE THE HOUSE
Two water-closets in an old dwelling used as a tenement

NOTE 5: This provision prohibits the construction of outdoor water-closets in place of the vaults. The outdoor closet is almost as great an evil as the vault. This matter is fully discussed in Note 10 under Section 47. The only place for a water-closet is inside the house. There is always a place inside the building, though owners will say there is not. In the case of private dwellings and two-family houses there is of course no difficulty. In the case of multiple dwellings where there are many families the problem is not so simple. Space can always be found, however, by giving up one room on the ground floor or on the top floor to a group of closets, having each closet separately ventilated to the outer air and in a separate compartment, or it can be done by putting one or two closets on each floor off the public hallway or between the two apartments, depending upon the number of families on a floor. This is the better way. In whatever way it is done it generally means alteration and readjustment and sometimes the giving up of rentable floor space. It always means, however, an improvement to the building, for which the tenants are willing to pay. By a slight increase in the monthly rental for each family, the interest on the money thus expended can be easily obtained. Irrespective of any of these considerations, the improvement is one which public safety demands. No city can call itself civilized which tolerates privy vaults.

NOTE 6: The new closets that must be installed are required to comply with the provisions relative to closets that would be installed in a new dwelling. The reasons for the various requirements as laid down in this section are all discussed in the discussion relative to new closets under Section 47.

NOTE 7: A "school-sink" is nothing more nor less than a sewer-connected privy vault. It derives its name from the fact that it was originally used in connection with the toilet accommodations provided for the public schools in New York City; it is called a sink because the trough which receives the contents of the privy is an iron trough or sink sunk in the ground. See Figure 46 on next page.

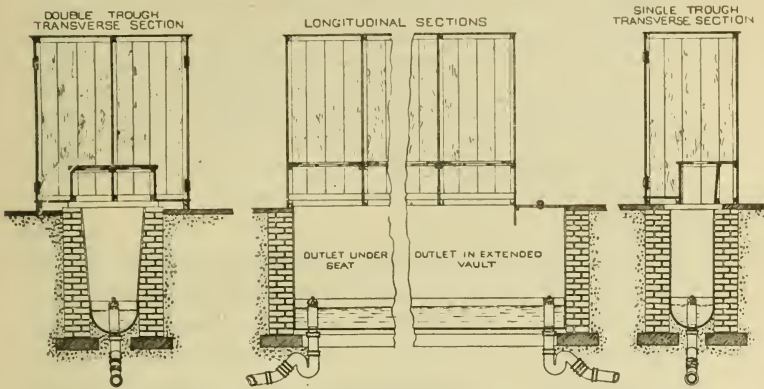


FIGURE 46
A SCHOOL-SINK

§ 125. BASEMENTS AND CELLARS. The floor of the cellar or lowest floor of every dwelling shall be free from dampness and, when necessary, shall be concreted with not less than FOUR inches of concrete of good quality and with a finished surface. The cellar ceiling of every dwelling shall be plastered, when so required by the health officer.

NOTE: Damp cellars cause disease. Where cellar conditions are good and the cellar floor for instance is of rock, it is not necessary to concrete it, but whenever necessary the floor should be concreted to prevent dampness. A concrete floor 4 inches thick is the standard in most cities. If objection is made to this on the ground of expense, the standard can be reduced to 3 inches without danger. The important thing is that the concrete shall be of good quality and that the job shall be well done. The requirement for a finished surface is for the purpose of preventing germs and filth collecting upon a rough floor. The reason for requiring the cellar ceiling to be plastered is to prevent cellar air from permeating the rest of the building. It is for the purpose of protecting the health of the occupants of the building living upstairs and not merely for the welfare of the persons who may live in the basement or first floor. It will not do to require the cellar ceiling to be plastered in every case,

Explana-
tion

however, because sometimes it is a fire-resistive ceiling made of fire-resistive blocks. Plaster in that case would be an unnecessary expense. In other cases the ceiling is nicely sheathed with matched boards. Sometimes it is covered with a good metal ceiling. The question is one which necessarily must be left to the discretion of the enforcing officials to apply the remedy appropriate to the varying conditions found.

§ 126. SHAFTS AND COURTS. In every dwelling where there is a court or shaft of any kind, there shall be at the bottom of every such shaft and court a door giving sufficient access to such shaft or court to enable it to be properly cleaned out. Provided that where there is already a window giving proper access it shall be deemed sufficient.

Explan-
ation

NOTE: In tenement houses especially the occupants frequently throw waste material out of the windows and this accumulates at the bottom of the court or shaft. This creates unsanitary conditions and frequently is a fire danger. Unless it is easy to get at this space and clean it out it is apt to be neglected.

§ 127. EGRESS. Every multiple-dwelling¹ exceeding one story in height shall have at least two independent ways of egress constructed and arranged as provided in section fifty-one of this act. In the case of multiple-dwellings erected prior to the passage of this act where it is not practicable to comply in all respects with the provisions of that section, the inspector of buildings shall make such requirements as may be appropriate to secure proper means of egress from such multiple-dwellings for all the occupants thereof. No existing fire-escape shall be deemed a sufficient means of egress unless the following conditions are complied with:²

(1) All parts of it shall be of iron, cement or stone.

(2) The fire-escape shall consist of outside balconies which shall be properly connected with each other by adequate stairs or stationary³ ladders, with openings not less than TWENTY-FOUR by TWENTY-EIGHT inches.

(3) All fire-escapes shall have proper drop ladders or stairways from the lowest balcony of sufficient length to reach a safe landing place beneath.

(4) All fire-escapes not on the street shall have a safe and adequate means of egress from the yard or court to the street or alley or to the adjoining premises.

(5) Prompt and ready access shall be had to all fire-escapes, which shall not be obstructed by bath-tubs, water-closets, sinks or other fixtures, or in any other way.

All fire-escapes that are already erected which do not conform to the requirements of this section may be altered⁵ by the owner to make them so conform in lieu of providing new fire-escapes, but no existing fire-escape shall be extended or have its location⁶ changed except with the written approval of the inspector of buildings.⁴ All fire-escapes hereafter erected⁷ on any multiple-dwelling shall be located and constructed as prescribed in section fifty-two of this act.

NOTE 1: This section deals with means of egress in existing multiple dwellings. It does not apply to other classes of dwellings, nor does it apply to multiple dwellings unless over one story in height. Owing to the varying conditions which exist in the different kinds of multiple dwellings erected at different times in each city, it is not practicable without imposing undue hardships, to lay down a precise and exact statement of conditions which must be complied with in regard to means of egress from such buildings. It is necessary, therefore, to leave to the enforcing officials in this case the power to require whatever may be necessary in order to secure proper means of egress for all the occupants of the building.

Explan-
ation

NOTE 2: An attempt has been made, however, to enumerate certain fundamental requirements which must be present in order to constitute a fire-escape a proper means of egress. These fundamental requirements it is not within the power of the enforcing official to modify or waive.

NOTE 3: The reasons for making the requirements which are enumerated in the five subdivisions of this section have been fully set forth in connection with

the discussion of the details of new fire-escapes in Section 52. It will be noted that stationary ladders are here permitted connecting the balconies, whereas in new fire-escapes they are forbidden and stairs required. It would be a hardship to require existing fire-escapes now equipped with ladders to be altered and stairs substituted, as this would practically mean the complete demolition of the fire-escapes and the erection of new ones.

NOTE 4: The proper official to enforce this section is the inspector of buildings; where no such official exists, the fire marshal or fire commissioner. In this connection see Section 153; also Section 2, Subdivision 20.

NOTE 5: It is deliberately intended to permit the alteration of existing fire-escapes which do not conform in every respect to the requirements of this section, so as to impose upon owners as little expense as possible.

NOTE 6: It is obvious that the owner should not be permitted to change the location of fire-escapes without having the matter first submitted to the responsible public official and passed upon by him.

NOTE 7: Where entirely new fire-escapes are erected they must comply in every respect with Section 52 governing the construction of fire-escapes for new dwellings.

§ 128. ADDITIONAL MEANS OF EGRESS. Whenever any multiple-dwelling is not provided with sufficient means of egress in case of fire the inspector of buildings shall order such additional means of egress as may be necessary.

Explana-
tion

NOTE: This is a broad "drag-net" power conferred upon the enforcing officials to enable them to deal with cases which may arise which it has not been possible to foresee in drafting the law. The power is supplementary to the powers already conferred.

§ 129. ROOF EGRESS; SCUTTLES, BULKHEADS, LADDERS AND STAIRS. Every flat-roofed multiple-dwelling exceeding one story in height erected prior to the passage of this act shall have in the roof a bulkhead, or a scuttle which shall be not less than TWO feet by THREE feet in size.

All such bulkheads and scuttles shall be fire-resistive or covered on the outside with metal and shall be provided with stairs or stationary ladders leading thereto and easily accessible to all occupants of the building. No scuttle or bulkhead shall be located in a room, but shall be located in the ceiling of the public hall on the top floor, and access through the same to the roof shall be direct and uninterrupted. When deemed necessary by the inspector of buildings scuttles shall be hinged so as to readily open. Every bulkhead in such multiple-dwelling shall have stairs with a guide or hand-rail leading to the roof, and such stairs shall be kept free from incumbrance at all times. No scuttle and no bulkhead door shall at any time be locked with a key, but either may be fastened on the inside by movable bolts or hooks. All key-locks on scuttles and on bulkhead doors shall be removed.

NOTE: This is a requirement for means of roof egress in existing multiple dwellings. It does not apply to other kinds of dwellings. The various points in this section have been fully discussed in connection with Section 53 and need no further illustration. The requirement that scuttles shall be hinged in certain cases is to meet the situation where the scuttles are too heavy to be easily raised by the ordinary person.

Explan-
ation

ARTICLE VI
REQUIREMENTS AND REMEDIES

In this article will be found the legal requirements, penalties for violations of the law, procedure, et cetera.

Explan-
ation

NOTE: The tendency of many housing reformers when they come to this article is to skip it, as it deals with matters which as a rule are not understood by the layman. This is not, however, safe procedure. The rest of the law will be found to be of little effect unless most of these remedies are enacted. This article should be especially referred to a local lawyer to make sure that it is in harmony with the legal practice in that city, and should be modified to suit the local practice. There are no sections in this article which can wisely be omitted. An effort to simplify and condense the law on this point is sure to produce disastrous results in the end.

§ 140. PERMIT TO COMMENCE BUILDING.¹ Before the construction or alteration of a dwelling, or the alteration or conversion of a building for use as a dwelling, is commenced, and before the construction or alteration of any building or structure on the same lot² with a dwelling, the owner, or his agent or architect shall submit to the health officer a detailed statement in writing, verified³ by the affidavit of the person making the same, of the specifications for such dwelling or building, upon blanks or forms to be furnished by such health officer, and also full and complete copies of the plans of such work. With such statement there shall be submitted a plat of the lot⁴ or plot of ground on which any such dwelling or building is to be erected or placed, showing the dimensions of the same, the location and outside dimensions of the proposed building and of all other buildings on the lot. Such statement shall give in full the name and residence, by street and number, of the owner⁵ or owners of such dwelling or building and the purposes for which such dwelling or building will be used. If such construction, alteration or conversion is proposed to be made by any other person than the owner of the land in fee, such statement shall contain the full name and residence, by street and number, not only of the owner of the land, but of every person interested in such dwelling, either as owner, lessee or in any representative capacity. Said affidavit shall allege that said specifications and plans are true and contain a correct description of such dwelling, building, structure, lot and proposed work. The statements and affidavits herein provided for may be made by the owner, or by the person who proposes to make the construction, alteration or conversion, or by his agent or architect. No person, however, shall be recognized as the agent of the owner, unless he shall file with the said health officer a written statement signed by such owner designating him as such agent.⁶ Any false swearing⁷ in a material point in any such affidavit shall be deemed perjury. Such specifications, plans and statements shall be filed⁸ in the said health depart-

ment and shall be deemed public records, but no such specifications, plans or statements shall be removed from said health department. The health officer shall cause all such plans and specifications to be examined with respect to the provisions of this act over which he has jurisdiction as set forth in section one hundred and fifty-three. If such plans and specifications conform to such provisions of this act, they shall be approved by the health officer and a written certificate to that effect shall be issued by him to the person submitting the same. Such health officer may, from time to time, approve changes in any plans and specifications previously approved by him, provided the plans and specifications when so changed shall be in conformity with law. The construction, alteration or conversion of such dwelling, building or structure, or any part thereof, shall not be commenced until the filing of such specifications, plans and statements, and the approval thereof, as above provided. The inspector of buildings shall not issue a permit for the erection or alteration of any dwelling until he shall receive from such health officer a written certification that the plans for such dwelling comply with those provisions of this act for the enforcement of which the health officer is responsible. Nor shall the inspector of buildings issue any such permit unless said dwelling also complies with those provisions of this act the enforcement of which is vested in the inspector of buildings. The construction, alteration or conversion of such dwelling, building or structure shall be in accordance with such approved specifications and plans. Any permit or approval which may be issued by the health officer but under which no work has been done above the foundation walls within one year from the time of the issuance of such permit or approval, shall expire by limitation.⁹ Such health officer shall have power for just cause to revoke or cancel any permit or approval in case of any failure or neglect to comply with any of the provisions of this act, or in case any false statement or representation is made in any specifications, plans or statements submitted or filed

for such permit or approval. Whenever improvements or alterations are ordered by the health officer in a dwelling heretofore erected, the plans for such changes shall, before a permit is issued by the inspector of buildings, be submitted to the health officer and be by said officer approved.

NOTE 1: This section provides for the procedure with regard to the filing of plans and specifications with the health officer before building a new dwelling, or altering an existing one, or converting some existing building into a dwelling. Explan-
ation

NOTE 2: It also applies to the construction of a building other than a dwelling on the same lot, so as to enable the health officials to see that the requirements of the law are observed and that the necessary open spaces between such buildings are maintained.

NOTE 3: The phrase "verified by the affidavit of the person making the same" means that the statement shall be sworn to before a notary public or a commissioner of deeds.

NOTE 4: The requirement that with the statement there shall be submitted a plat of the lot showing its dimensions and certain other facts is important. A common practice with unscrupulous builders and architects is to file false dimensions of their lots, and where the adjoining premises are not built upon the inspector, when he inspects the job, is often deceived. The requirement that a plat of the lot be filed will avoid this and enable the department to verify the property lines through the insurance maps or through the records of some title company. It also places the department in a much stronger position in subsequent litigation if an attempt at deception is made.

NOTE 5: The name and address of the owner and other persons responsible are of course essential.

NOTE 6: No person should be permitted to file plans unless his authority so to do is authorized in writing by the owner. This is an important provision. Without it, it has frequently happened that the architect who has filed the plans has made changes in them without authority from the owner in order to get the plans approved. The owner has then built the building in accordance with the original plans which were disapproved, and when called to account by the de-

partment has claimed that he never knew that changes had been made and that he did not authorize the architect to make them. Under these circumstances it is difficult to hold anybody responsible. The requirement mentioned will prevent any such evasion.

NOTE 7: The declaration that any false swearing shall be deemed perjury is probably not of very great value in view of the common practice which prevails in many of our courts where day by day witnesses perjure themselves and nothing happens; but it may have the moral value of frightening builders and architects who would otherwise be inclined to resort to questionable practices.

NOTE 8: It is necessary to provide that the plans shall be kept on file in the office of the health department because in some cities the delightfully ingenuous method is practiced by which a builder submits the plans to the inspector of buildings, the inspector of buildings approves them, then the plans are taken away and the inspector of buildings has no means of knowing whether the building is erected in accordance with the plans or not. Building inspection under these circumstances is farcical, but this is the only method that is employed in a number of cities. It is obvious that the plans to be of value must remain in the health department at all times. The provision that the plans shall be deemed public records will enable the housing reformer when he wishes to get after the public official, in case the law is not being complied with, to get at the records and examine them. Without such a clause the claim might be made by a health officer who wished to block such an inquiry that he could not permit examination of the plans as these were the property of the architect who had filed them.

NOTE 9: It is good practice to have permits expire by limitation after an interval of one year. Without this provision, the filing of plans and the securing of their approval might give the right to build under the same plans ten years later although the law might have been changed radically in the interval. This of course is not desirable.

§ 141. CERTIFICATE OF COMPLIANCE.¹ No building hereafter constructed as or altered into a dwelling shall be

occupied in whole or in part³ for human habitation until the issuance of a certificate² by the health officer that said dwelling conforms in all respects to the requirements of those provisions of this act relative to dwellings hereafter erected the enforcement of which is vested in the health officer as provided in section one hundred and fifty-three. Such certificate shall be issued within fifteen days after written application therefor if said dwelling at the date of such application shall be entitled thereto.

NOTE 1: This is a provision of much importance as it assures the building of new houses in strict compliance with the law, by preventing their occupancy without a certificate from the health officer to the effect that the dwelling has been built in accordance with law. If the community wants its buildings built right this is the way to bring it about. No one can properly raise any objection to this requirement, though the whole building fraternity in the locality may secretly oppose it, as few buildings are erected according to law at the present time. No valid argument can be advanced against this section as it is the builder's business to know what the law is before he builds and to comply with it. Having filed plans with the health officer and secured their approval, it is his further duty to build in accordance with them. If he wants to make changes he should get the consent of the health officer before such changes are made. The provisions of this section should be strictly enforced and owners should not be permitted to put tenants in new buildings or to occupy them themselves without such a certificate.

Explanation

NOTE 2: Where buildings are built on building loans, as most of them are in our cities, efforts should be made to get the title companies, banks, insurance companies, lawyers, and capitalists who make such loans to refuse to make the final payment until the builder can show this final certificate from the health officer. This system has been in practice in New York City since 1901 and has brought about most beneficial results.

NOTE 3: The builders of modern hotels and high-class apartment houses very often desire to occupy part of such buildings before the building is entirely

completed. There is no objection to this provided the parts occupied, and accessory to them, such as stairs, elevators, etc., are built according to law and are also completed and fit for occupancy. In such cases it is wise to adopt the following Concession:

Concession

CONCESSION: "Nothing in this section contained shall be construed so as to prohibit the health officer from issuing a certificate for the occupancy of any complete unit of a multiple-dwelling when such unit is entitled thereto and is in proper condition for occupancy in the opinion of the health officer."

§ 142. UNLAWFUL OCCUPATION.¹ If any building hereafter constructed as or altered into a dwelling be occupied in whole or in part for human habitation in violation of the last section, during such unlawful occupation no rent³ shall be recoverable by the owner or lessee of such premises for said period, and no action or special proceeding shall be maintained therefor or for possession of said premises for non-payment of such rent, and said premises shall be deemed unfit for human habitation and the health officer may² cause them to be vacated accordingly.

Explanation

NOTE 1: This seemingly drastic provision is necessary in order to prevent the occupancy of new buildings built contrary to law and which do not have a certificate as required in Section 141. The health officer should not hesitate to vacate buildings thus unlawfully occupied.

NOTE 2: It is not made mandatory upon the health officer to vacate buildings thus occupied, because it is recognized that there may be one or two technical violations of the law which are easily and quickly remedied and that a mere service of notice upon the owner will bring about compliance without resorting to the extreme remedy of vacation. Where there are serious violations, however, buildings should be quickly vacated. The only satisfactory thing is not to allow them to be tenanted.

NOTE 3: If objection is made to the clause that no rent shall be recoverable by the owner and that no

action for the recovery of the premises or for non-payment of rent may be had, on the ground that this is too drastic, there is no harm in permitting a concession in this respect. In such case the following concession is suggested. After the words "unlawful occupation" omit the following:

CONCESSION: "no rent shall be recoverable by the owner or lessee of such premises for said period, and no action or special proceeding shall be maintained therefor or for possession of said premises for non-payment of such rent, and" Concession

§ 143. PENALTIES FOR VIOLATIONS.¹ Every person who shall violate or assist in the violation of any provision of this act shall be guilty of a misdemeanor² punishable by imprisonment for TEN days for each and every day that such violation shall continue, or by a fine of not less than TEN dollars nor more than ONE HUNDRED dollars if the offense be not wilful, or of TWO HUNDRED AND FIFTY dollars if the offense be wilful, and in every case of TEN dollars for each day after the first that such violation shall continue, or by both such fine and imprisonment in the discretion of the court. The owner of any dwelling, or of any building or structure upon the same lot with a dwelling, or of the said lot, where any violation of this act or a nuisance exists, and any person who shall violate or assist in violating any provision of this act, or any notice or order of the health officer³ made under the authority of the provisions of this act, shall also jointly and severally for each such violation and each such nuisance be subject to a civil penalty of FIFTY dollars.⁴ Such persons shall also be liable for all costs, expenses and disbursements⁵ paid or incurred by the health department, by any of the officers thereof or by any agent, employee or contractor of the same, in the removal of any such nuisance or violation. Any person who having been served with a notice or order to remove any such nuisance or violation shall fail to comply with said no-

tice or order within FIVE days after such service, or shall continue to violate any provision or requirement of this act in the respect named in said notice or order, shall also be subject to a civil penalty of TWO HUNDRED AND FIFTY dollars. For the recovery of any such penalties, costs, expenses or disbursements, an action may be brought in any court of civil jurisdiction.⁶ In case the notice required by sections one hundred and forty-eight and one hundred and forty-nine of this act is not filed, or in case the owner, lessee or other person having control of such dwelling does not reside within the state, or cannot after diligent effort be served with process therein, the existence of a nuisance or of any violation of this act, or of any violation of an order or a notice made by said health officer as authorized by this act, in said dwelling or on the lot on which it is situated, shall subject said dwelling and lot⁷ to a penalty of TWO HUNDRED AND FIFTY dollars. Said penalties shall be a lien⁸ upon said house and lot.

Explan-
ation

NOTE 1: This important section of the law provides for the penalties incurred by persons violating it. It should be noted, in the first place, that every *person* who violates any provision of the act is liable under it. This means not only owners, but tenants, also contractors, builders, architects and their assistants or workmen. It even applies to public officials. If the health officer or inspector of buildings violates it in failing to enforce it, he is similarly liable for these penalties.

This provision is one to point out to owners when they make claim, as they always do, that the tenant is never held responsible and that all responsibility is placed upon the owner. This should answer that argument.

NOTE 2: Two kinds of penalties are provided, criminal and civil. Under the criminal procedure a violation of the act is punishable by either imprisonment for ten days for each day that the violation continues or by a fine of not less than \$10 or more than \$100; but where the violation is wilful, the fine is made \$250, or the offender may be punished by both fine and imprisonment in the discretion of the court.

NOTE 3: It should be observed that the penalties which attach to the violation of this law also attach to the failure to comply with any notice issued by the health officer under authority of this act, which is a very distinct broadening of his powers.

NOTE 4: Any person violating the law is also subject to a civil penalty of \$50 and to a further civil penalty of \$250 if he fails to comply with a notice or order from the enforcing official within five days after service thereof.

NOTE 5: Liability is also incurred for any necessary disbursements or expenses incurred by the health department in remedying unsanitary conditions. This applies where the health officer is unable to get prompt compliance from the owner and has to remove the violation himself through his own employees or contractors, as is authorized in the last part of Section 144.

NOTE 6: An important provision is the one which gives the department the right to bring an action in any court of civil jurisdiction. This means that these actions need not be brought always in the minor courts where the judges are often not sympathetic to the enforcement of housing laws.

NOTE 7: The somewhat novel procedure is adopted by which where it is difficult to find the owner, or in the case of an absentee owner, it is possible to bring proceedings *in rem*, that is, against the dwelling itself, following the practice that prevails in the admiralty law.

NOTE 8: The requirement that penalties imposed in such cases shall be a lien on the property is necessary, as otherwise the owner might transfer the property and thus escape the penalty.

§ 144. PROCEDURE.¹ Except as herein otherwise specified, the procedure for the prevention of violations of this act or for the vacation of premises unlawfully occupied, or for other abatement of nuisance in connection with a dwelling, shall be as set forth in charter and ordinances. In case any dwelling, building or structure is constructed, altered, converted or maintained in violation of any provision of this act or of any order or notice of the health officer made under the authority of the provisions of this

act, or in case a nuisance exists in any such dwelling, building or structure or upon the lot on which it is situated, said health officer may institute any appropriate action² or proceeding to prevent such unlawful construction, alteration, conversion or maintenance, to restrain, correct or abate such violation or nuisance, to prevent the occupation of said dwelling, building or structure, or to prevent any illegal act, conduct or business in or about such dwelling or lot. In any such action or proceeding said health officer may by affidavit setting forth the facts apply to the circuit³ court or to any justice thereof for an order granting the relief for which said action or proceeding is brought, or for an order enjoining all persons from doing or permitting to be done any work in or about such dwelling, building, structure or lot, or from occupying or using the same for any purpose until the entry of final judgment or order. In case any notice or order issued by said health officer is not complied with, said health officer may apply to the circuit court³ or to any justice thereof for an order authorizing him to execute and carry out⁴ the provisions of said notice or order, to remove any violation specified in said notice or order, or to abate any nuisance in or about such dwelling, building or structure or the lot upon which it is situated. The court or any justice thereof is hereby authorized to make any order specified in this section. In no case shall the health department, health officer, or any officer or employee thereof, or the city, be liable⁵ for costs in any action or proceeding that may be commenced in pursuance of this act. The actions, proceedings and authority of the health officer shall at all times be regarded as in their nature judicial, and shall be treated as prima facie just and legal.⁶

Explan-
ation

NOTE 1: It is deliberately planned in this and other sections to give to the enforcing officials in their fight against unsanitary conditions every weapon known to modern or ancient warfare. The health officer should be armed with rifle, shot gun, automatic revolver, howitzer, stiletto, dirk, cutlass, and poignard. It is

true that he will seldom wish to use all of these; certainly not all at once; but there are troublesome cases where he may need to use powers which he would ordinarily not think of using. One great advantage of giving such broad powers to the enforcing official is that it deprives him completely of the excuse that he has not sufficient power to enable him to remedy the conditions. This is a favorite excuse of incompetent public officials in all branches of civic work. On the other hand, housing reformers need have no fear of such powers being abused. The cases where a health officer has exceeded his powers are so rare as to be negligible. The ordinary health officer is much more likely to err on the other side and fail to use his powers because of "pressure" or opposition of interests affected.

NOTE 2: Under the provisions of this and other sections the health officer may use any or all of the following methods in trying to bring about compliance with the law. He may sue the responsible person for a penalty in a civil suit; he may arrest the offender and put him in jail; he may stop the work in the case of a new building, and prevent its going on; he may prevent the occupancy of a building and keep it vacant until such time as the conditions complained of are remedied; he can evict the occupants of a building where conditions are contrary to law and prevent its reoccupancy until the conditions have been cured; and finally, he can hire workmen and go in and remedy the defects himself, charging the cost to the owner. All of these things a health officer should be given power to do. No one of them is unnecessary. For further discussion of this subject see Housing Reform.*

NOTE 3: It should be observed that under the provisions of this section the health officer is not limited to bringing actions in the minor courts, where frequently unsatisfactory results are obtained. Instead if he so desires he can bring an action in the higher courts. The name of such court varies in different states. By "circuit" court is meant that state court next highest to the court of last resort in the state.

NOTE 4: The power to hire laborers and do the

*Housing Reform, pp. 138-144.

work himself is an important one, especially in cases where nuisances exist which are dangerous to the community and the owner refuses or neglects to comply with reasonable promptness. This is especially important in the case of a privy vault where an entire neighborhood may be injured by its presence or where there are accumulations of filth and garbage in back yards and the owner cannot be brought to remove them.

If the health officer is to do such work, however, provision must be made for a contingent fund out of which he can pay the contractors as otherwise this power will be found of little effect. It is not advised that this method be generally employed but only in emergencies.

NOTE 5: The provision that the city officials shall not be liable for suits for damages because of their official action is a very proper one. Without this provision it might be easy for an owner to scare a timid health officer by threatening personal prosecution with the result of stopping the issuance of orders necessary for the protection of the health of the community.

NOTE 6: The requirement that the actions, proceedings and authority of the health officer shall be deemed just and legal is an important one and saves a great deal of red tape in the authentication of papers of the health department. It is proper that the court should enter upon the hearing of the case with the assumption that the city officials are acting in good faith. It is not like a case of private litigation.

§ 145. TENANT'S RESPONSIBILITY. If the occupant of a dwelling shall fail to comply with any provision of this act for which he is responsible and over which he has control after due and proper notice from the health officer, such failure to comply shall be deemed sufficient cause for the summary eviction of such tenant by the owner and the cancellation of his lease.

Explan-
ation

NOTE: This is an important and necessary provision so far as it relates to conditions for which the occupants of dwellings are responsible and over which they have control. This means especially conditions

§§ 146, 147 REQUIREMENTS AND REMEDIES

of uncleanness, accumulations of filth, and so forth. It properly gives the owner a club to hold over the delinquent tenant's head. Where he fails to clean up and the owner evicts him and the dwelling becomes vacant, then of course the duty of cleaning up rests on the owner before a new tenant is taken into the house.

§ 146. LIENS. Every fine imposed by judgment under section one hundred and forty-three of this act upon the owner of a dwelling shall be a lien¹ upon the real property in relation to which the fine is imposed from the time of the filing of a certified copy of said judgment in the office of the clerk of the county in which said dwelling is situated, subject only to taxes, assessments and water rates and to such mortgage and mechanics' liens as may exist thereon prior to such filing; and it shall be the duty of the health officer upon the entry of said judgment to forthwith file the copy as aforesaid, and such copy, upon such filing, shall be forthwith indexed by the clerk in the index of mechanics' liens.

NOTE 1: All penalties that may be imposed by judgment are made liens upon the property. This is necessary as otherwise there would be no way of collecting them, as the owner could transfer the property to a dummy. Judgments under such circumstances would have no terror for owners who refused to obey the law, and civil proceedings, as well as criminal proceedings where fines are imposed, would soon lose their value as a means of securing law enforcement.

Explana-
tion

NOTE 2: Care should be taken to see that the method prescribed here is in harmony with the local practice.

§ 147. LIS PENDENS.¹ In any action or proceeding instituted by the health officer, the plaintiff or petitioner may file in the county clerk's office of the county where the property affected by such action or proceeding is situated, a notice of the pendency of such action or proceeding. Said notice may be filed at the time of the commencement

of the action or proceeding, or at any time afterwards before final judgment or order, or at any time after the service of any notice or order issued by said health officer. Such notice shall have the same force and effect as the notice of pendency of action provided for in the code of civil procedure. Each county clerk with whom such notice is filed shall record it, and shall index it to the name of each person specified in a direction subscribed by the corporation counsel. Any such notice may be vacated upon the order of a judge or justice of the court in which such action or proceeding was instituted or is pending, or upon the consent in writing of the corporation counsel. The clerk of the county where such notice is filed is hereby directed to mark such notice and any record or docket thereof as canceled of record, upon the presentation and filing of such consent or of a certified copy of such order.

Explan-
ation

NOTE 1: The purpose of this provision is to make public the fact that there is litigation with regard to a particular building and that there are violations of law which the city is trying to have removed, and thus prevent unscrupulous owners from "unloading" the property upon innocent purchasers who might buy in ignorance of the fact that there were these existing violations. This provision should be differentiated from the ordinary filing of a *lis pendens* (suit pending) after the entry of final judgment, which of course can always be done without any special provision in an act of this kind. What this section does is to permit the filing of such notice at the beginning of the action, not waiting until after judgment has been rendered. This enables the health department, where they have reason to believe that the owner is likely to evade compliance, to file a *lis pendens* immediately upon the service of its first notice.

NOTE 2: Care should be taken to see that the provisions of this section harmonize with the local practice.

§ 148. REGISTRY OF OWNER'S NAME. Every owner of a dwelling and every lessee of the whole house or other person having control of a dwelling, shall file in the health de-

partment a notice containing his name and address and also a description of the property, by street number or otherwise as the case may be, in such manner as will enable the said department easily to find the same.

NOTE: This is an important section and is essential to a proper enforcement of sanitary laws. As the responsibility for compliance rests in most cases upon the owner, it is of vital concern to the health department that the name and address of every person responsible for the maintenance of sanitary conditions in the city should be quickly ascertainable. Unless this information is kept on file in the health department much time and energy are wasted in a search for the names and addresses of owners. Years ago in one of our Eastern cities in order to meet this situation a law was passed requiring the posting of the owner's name and address in a conspicuous place inside of the entrance door of every tenement house, but this provision in practice did not work. It was difficult to enforce and subjected owners to a vast amount of solicitation from advertising agents and persons who wished to sell goods to them. It also opened up possibilities of blackmail in connection with the purchase of property. The law was subsequently repealed. The provision found in this code has been found to work admirably in practice. No owner of property can with reason object to a requirement that he shall register his name and address with the public officials, especially with the health department. The health department should see that this section is strictly enforced.

Explanation

§ 149. REGISTRY OF AGENT'S NAME. Every owner, agent or lessee of a dwelling may file in the health department a notice containing the name and address of an agent of such house, for the purpose of receiving service of process, and also a description of the property by street number or otherwise as the case may be, in such manner as will enable the health department easily to find the same. The name of the owner or lessee may be filed as agent for this purpose.

Explana-
tion

NOTE: This is quite a different provision from the one in the preceding section, though it may seem very similar at first glance. Instead of imposing a duty upon the owner, this grants him a privilege and enables the owner of property for his own convenience to file in the health department the name of a person to whom he wishes all departmental notices to be sent.

§ 150. SERVICE OF NOTICES AND ORDERS. Every notice or order in relation to a dwelling shall be served FIVE days before the time for doing the thing in relation to which it shall have been issued; except that in cases of public emergency where the health of the community is involved, the health officer may require an earlier compliance. The posting of a copy of such notice or order in a conspicuous place in the dwelling, together with the mailing of a copy thereof on the same day that it is posted, to each person, if any, whose name has been filed with the health department in accordance with the provisions of sections one hundred and forty-eight and one hundred and forty-nine of this act at his address as therewith filed, shall be sufficient service thereof.

Explana-
tion

NOTE: This permits legal service by the posting of a copy of the notice in the dwelling itself in addition to mailing a copy to the person whose name is registered in the health department, as required by Section 148. It thus does away with the delay and expense that are usual in cases where personal service is required. In view of the fact that legal service can be made in this way, an added incentive is afforded owners to register their names in the department, as otherwise they are likely to have no copy of orders served upon them except by chance seeing a copy that may be posted on the wall of the dwelling of which they are the owner. In such event they have no one to blame but themselves and the courts will hold them liable, as if they had been personally served.

§ 151. SERVICE OF SUMMONS. In any action brought by the health officer in relation to a dwelling for injunction, vacation of the premises or abatement of nuisance, or to

establish a lien thereon, it shall be sufficient service of the summons to serve the same as notices and orders are served under the provisions of the last section; provided, that if the address of any agent whose name and address have been filed in accordance with the provisions of section one hundred and forty-nine of this act is in the city in which the dwelling is situated, then a copy of the summons shall also be delivered at such address to a person of proper age, if upon reasonable application admittance can be obtained and such person found; and provided also, that personal service of the summons upon the owner of such dwelling shall be sufficient service thereof upon him.

NOTE: This simply provides that the modes of service authorized in the preceding section for notices and orders shall also be legal for the service of summonses. Both provisions are based upon the assumption that owners of residence property are responsible for the maintenance of their property and that they must accept such responsibility when they purchase it and that the duty of living up to that responsibility is imposed primarily upon them and not upon the public officials.

Explan-
ation

§ 152. INDEXING NAMES. The names and addresses filed in accordance with sections one hundred and forty-eight and one hundred and forty-nine shall be indexed by the health officer in such a manner that all of those filed in relation to each dwelling shall be together and readily ascertainable. Said indexes shall be public records, open to public inspection during business hours.

§ 153. ENFORCEMENT.¹ The provisions of this act shall be enforced in each city, town and village by the health officer,² except that the inspector of buildings shall enforce sections fifty to sixty-two inclusive, also sections seventy-nine, eighty, eighty-two, eighty-four, one hundred and twenty-seven, one hundred and twenty-eight and one hundred and twenty-nine. Where there is no inspector of buildings, such last-named sections shall be enforced by

the state fire marshal, unless the mayor or other chief executive officer of such city, town or village shall designate some other public official thereof for the enforcement of the said sections.

Such supplementary ordinances as are authorized to be enacted under the authority of section seven of this act by the local legislative bodies of each city, town or village, shall be enforced by the health officer and the inspector of buildings on the same basis as above outlined. The inspector of buildings shall enforce such provisions relative only to fire prevention, fire-escapes, egress and the like. The health officer shall enforce all other provisions especially those relative to light, ventilation, plumbing, sanitation, occupancy, maintenance and the like.

Each of said officers shall keep and preserve as to each building a complete record of all inspections, permits and orders issued pursuant to this act. An action may be brought and proceedings taken for the enforcement of this act by any taxpayer³ of the city, town or village.

Explana-
tion

NOTE 1: There will probably be great difference of opinion in reference to this section. The scheme outlined here with reference to the enforcement of the act contemplates its enforcement in its entirety (with the exception of those provisions which relate to means of egress and fire-escapes) by the health department. This is done deliberately. While very plausible reasons can be advanced for a division of responsibility between the health officer and inspector of buildings, or similar official, such division of responsibility does not work out advantageously in actual practice. It is claimed, for example, that the inspector of buildings, whose duty it is to see that all new structures and those altered are built in compliance with the law, should enforce those provisions of this act which deal with new structures or with alterations, and that the health department should confine itself to the securing of sanitary conditions in existing houses. From many points of view this is logical, but it is not desirable. It is quite true that the building officials concern themselves with new buildings and with nothing else, as a rule.

It is also true that the health officials concern themselves with the maintenance of sanitary conditions in existing buildings and not with new buildings, but notwithstanding this fact it is necessary that the health officials of the community should enforce all of the provisions of a housing law except those which deal with fire-escapes and means of egress. Practically all the other provisions, excepting the provisions of Title 3 of Article 11 entitled Fire Protection, deal with sanitary conditions; that is, with making sure that adequate light and ventilation are secured, that rooms are large enough and properly arranged, and that sanitary conditions of various kinds are maintained. The health officials are the only persons who are really competent to determine these questions. There are, moreover, no practical difficulties in the way of this plan of enforcement, so far as this law is concerned, as the law does not concern itself with those technical phases of building construction which are usually found in building codes and which it might be difficult to have an ordinary sanitary inspector pass upon. A sanitary inspector, however, is quite as competent to measure a court and determine whether it is 10 feet wide or not as is a building inspector; he is quite as competent to measure a room and see if it contains 90 square feet and is 9 feet high as is a building inspector; and so with the other provisions of the act which deal with new buildings. It is true that the provisions of Title 3 of Article 11, dealing with Fire Protection, do more properly belong in the building department, but as the health inspector has to inspect the building to see that the other requirements are being complied with, it has seemed best to place the enforcement of all the provisions of the housing law in the hands of the health officials, with the one exception of fire-escapes and means of egress, thus making a clean-cut division between the duties of these two officials. Under this plan the inspector of buildings enforces the building code, the health officer enforces the housing law. The reasons which lead to these conclusions will be found fully set forth in Housing Reform.*

NOTE 2: In some cities it may be more appropriate to place the responsibility for the enforcement of the

* Housing Reform, pp. 123-129.

law upon the health "department" rather than upon the health officer. As a rule the health officer is in most places the chief executive officer of the health department, but in some cities this is not the case and he occupies a more or less subordinate position. The matter should be adjusted to suit the local conditions.

NOTE 3: The provision contained in the last sentence of this section, giving the right to a taxpayer to institute an action for the enforcement of the act, is a very valuable provision and will prove of great service where public officials are inclined to be lax or dilatory.

§ 154. POWERS CONFERRED. The powers conferred by this act upon the public officials mentioned in this act shall be in addition to the powers already conferred upon said officers, and shall not be construed as in any way limiting their powers except as provided in section seven.

Explan-
ation

NOTE: This provision is necessary because in some cities it has been claimed that the powers conferred by an act of this kind are in lieu of powers which already exist and therefore take away some of the existing powers. This of course is undesirable.

§ 155. INSPECTION OF DWELLINGS. The health officer shall cause a periodic inspection¹ to be made of every multiple-dwelling² at least once a year. Such inspection shall include thorough examination of all parts of such multiple-dwelling and the premises connected therewith. The health officer is also hereby empowered to make similar inspections of all dwellings as frequently as may be necessary.

Explan-
ation

NOTE 1: This is a vitally important section. It makes mandatory periodic, systematic inspection of all multiple dwellings at least once a year. This is the only system of inspection worthy of the name. The ideal requirement would be to have such inspection made every three months, but this is not feasible in most cities as the expense involved is too great. Once a year, however, is entirely practicable. For

further discussion of this subject see Housing Reform.*

NOTE 2: It should be noted that this requirement calling for a mandatory inspection once a year is limited to multiple dwellings although the health officer is empowered to make similar inspections of *all* dwellings as frequently as may be necessary. Some ingenious persons may claim that the inspection by health officers of multiple dwellings is limited to once a year. Such claim should not be entertained for a moment, in view of the provisions contained in Sections 154 and 156 and also the further clear and distinct language employed in Section 155. In other words, the health officer *must* inspect every multiple dwelling *at least* once a year and *may* inspect it as often as he finds it necessary or desirable.

§ 156. RIGHT OF ENTRY.¹ The health officer and all inspectors, officers and employees of the health department, and such other persons² as may be authorized by the health officer, may without fee or hindrance enter, examine and survey all premises, grounds, erections, structures, apartments, dwellings, buildings and every part thereof in the city. The owner or his agent or representative and the lessee and occupant³ of every dwelling and every person having the care and management thereof shall at all reasonable times when required by any of such officers or persons give them free access to such dwellings and premises. The owner of a dwelling and his agents and employees shall have right of access⁴ to such dwelling at reasonable times for the purpose of bringing about a compliance with the provisions of this act or any order issued thereunder.

NOTE 1: Without this definite grant of power health officers have often found themselves estopped from carrying on their work. Explanation

NOTE 2: It should be noted that the right to make inspections is not limited to the employees of the department, but is enjoyed also by "such other persons as may be authorized by the health officer."

* Housing Reform, pp. 134-137.

This will permit the inspector of a housing reform association to make inspections upon the authorization of the health officer. This is important, especially in those communities where it is difficult to secure appropriations from the city treasury and where the health officer is unwilling to enter upon an active and comprehensive scheme of inspection work until its value and necessity have been demonstrated to him. Under this plan the private citizen can be given practically all of the powers of a city employee, so far as inspection is concerned.

NOTE 3: The second sentence of this section places personal responsibility upon every agent, lessee and occupant, so that any person interfering with the free right of entry of persons to whom it is granted would be liable for the penalties which accrue under this act.

NOTE 4: The last sentence in this section is made necessary so as to enable the owner to comply with the orders of the health department. Otherwise he might claim, and justly, that the tenant has possession of the premises and that he (the owner) has no right to go upon them and do what the health department has ordered to be done. The specific granting to the owner of this right makes impossible any such situation.

§ 157. INJUNCTION; UNDERTAKING. No preliminary injunction shall be granted against¹ the health department or its officers except by the circuit court or a justice thereof after service of at least THREE days' notice, together with copies of the papers upon which the motion for such injunction is to be made. Whenever such department shall seek any provisional remedy or shall prosecute an appeal it shall not be necessary before obtaining or prosecuting the same to give a bond.²

Explan-
ation

NOTE 1: In view of the important powers which the health department necessarily exercises for the preservation of the health of the community, it is obviously appropriate that a private individual, owner, or occupant should not be in a position to restrain the health department and prevent its carry-

ing out necessary work by any *ex parte* statement of facts to the court without the health department being represented. This provision makes that situation impossible and insures the health department's receiving notice of any application for an injunction in which it is sought to restrain the department from interfering with a building. This situation is likely to arise chiefly in connection with cases where the health department is seeking to stop the work on a new building because of violation of the law or to prevent the occupancy of a building for similar reasons or to require the vacation of a building where it is unfit for habitation.

NOTE 2: It is obvious that the instances where the health department brings actions and takes appeals from decisions are not in the same category as private litigation, and there is no reason why a responsible agent of the city government should be required to give a bond under such circumstances.

§ 158. LAWS REPEALED.¹ All statutes of the state and all local ordinances or parts thereof so far as inconsistent with the provisions of this act are hereby repealed. Wherever this act requires a greater width or size of yards or courts, or requires a lower height of building, or requires a greater percentage of lot to be left unoccupied, or imposes other higher standards than is required in any other statute or any local ordinance or regulation,² the provisions of this act shall govern. Wherever the provisions of any other statute or local ordinance or regulation require a greater width or size of yards or courts, or require a lower height of building, or require a greater percentage of lot to be left unoccupied, or impose other higher standards than is required in this act, the provisions of such statute or local ordinance or regulation shall govern.

NOTE 1: Wherever there is in existence a law or local ordinance and it is desired to definitely repeal it, it should be specifically repealed in this section by inserting at the end thereof: "The provisions of chapter of the laws of are hereby repealed," as the courts have in recent years shown a

Explana-
tion

disinclination to sustain what is known as the "general repealer." Where, however, there is no specific ordinance dealing with the subject matter of this housing act, or any similar state law, but where there are provisions scattered through building codes, sanitary codes, and plumbing codes, applicable not only to dwellings but to all kinds of buildings, as is the usual case, there is no way other than that embodied in this section of repealing such provisions.

NOTE 2: By this provision the community is always assured of the maintenance of the higher standards. Without it, there is great danger of the repeal of important provisions through the enactment of a local Building Code containing much lower standards. Without a provision of this kind, the later enactment would probably govern. The increasing number of Zoning Laws adds emphasis to the importance of this point; for, they as a rule, concern themselves with many of the same questions that are found in a Housing Law—viz., restriction of height, sizes of courts, yards, percentage of lot that may be occupied, and so forth.

NOTE 3: This is not an attempt, as might appear, to prevent a future legislature from enacting laws in conflict with or directly repealing the provisions of this act. No such plan could of course succeed, as it would be unconstitutional. One legislature cannot bind a future legislature. All that is attempted here is to indicate the intent of the legislature and to provide for a situation which may easily arise wherein the provisions of some future local charter affecting the city in question, or similarly, of some local ordinance or regulation, may be in conflict with the provisions of this law. The effect of this section, therefore, would be to show that the legislature intended that this law should govern. If this were not the intention of the legislature, so long as this provision of law is contained in this code, it would be necessary for the legislature to specifically repeal or modify it. In other words, this section would make impossible the repeal by *implication* of important provisions of this code because they might be in conflict with some future local statute or ordinance.

§ 159. VALIDITY.¹ If any section or clause or part of this act shall be found invalid, the validity of the remainder

shall in no way be affected thereby. The act shall be liberally construed to promote its general objects for the health, safety and welfare of the community.²

NOTE 1: In many states such a provision is unnecessary; for, it has been for years the practice of the higher courts to so hold. In some states, however, this is not the case. It can do no harm in any state to include this provision. It will be "playing safe" to do so. Explanation

NOTE 2: Caution should be given to be on one's guard against merely stating that "the act shall be construed liberally." For such a provision is frequently seized upon by architects, builders, owners and lax public officials to justify them in interpreting and enforcing the law "liberally" to the interests affected by it. The direct reverse of this is what is sought, viz., that the law shall be not construed narrowly, but so as to benefit the "health, safety and welfare of the community."

§ 160. WHEN TO TAKE EFFECT. This act shall take effect immediately.¹

NOTE 1: The desirable thing is to have the act take effect immediately, but this cannot always be done as there will be numerous building operations in contemplation, for many of which contracts may have been made but for which plans had not up to the time of the passage of the act been filed and approved by the local authorities. One is here on the horns of a dilemma. If the act does not take effect promptly, builders and contractors who wish to secure the benefits of building under the more liberal provisions of existing law, will file plans in large quantities for most of the lots in the city, in order to anticipate the new law, and people will thus be permitted to build dwellings under the provisions of the old one for many years to come. If the law has had wide publicity before its enactment, there will be no real hardship in making the act take effect immediately, as architects, owners and builders will have had ample notice of it in connection with the discussion arising during its passage through the legislature; but where such Explanation

free public discussion has not been had, it will hardly be practicable in many instances to make the act take effect immediately. These considerations apply, of course, only to those provisions of the act which deal with new buildings and not in any sense to any of the other provisions of the act. Except with regard to new buildings, the act should take effect immediately in every case. If because of the reasons stated it seems wise to meet the views of owners, architects and builders, and permit the filing of a reasonable number of plans for the dwellings contemplated under the provisions of the old law, the following concession is suggested. At the end of this section strike out the period and insert a comma and add the following:

Concession

CONCESSION: "except that Articles II and III thereof relative to 'Dwellings Hereafter Erected,' and to 'Alterations,' shall take effect thirty days² after its signature by the governor. Dwellings may be hereafter erected or altered under the laws and ordinances in force and effect on the day this act was passed by the legislature, provided the plans for such dwellings shall have been filed in the office of the inspector of buildings and shall have been approved in writing by him within thirty days after this act is signed by the governor; such plans shall be bona fide plans suited to the lots for which they are filed, shall show the interior arrangement and grouping of the rooms in the proposed dwelling, and the arrangement of yards and courts. The right to build under the said laws and ordinances shall cease and terminate in the case of any dwelling that has not progressed beyond the second tier of beams³ within one year from the said date."

Explanation

NOTE 2: Under this concession thirty days' time is allowed owners, builders, and architects to file plans under the old law; that is, thirty days after the governor has signed the act. In many states the governor is allowed a thirty-day period in which to sign bills; in some only ten. In the former case, owners and builders may thus be afforded two months' time in which to adjust themselves to the changed

conditions. In any event they will be afforded nearly forty days' time, which should prove ample.

NOTE 3: In order that the life of the plans thus filed may not be indefinitely extended, the requirement is added that the building in question must have progressed beyond the second tier of beams within one year after the act takes effect. This will not be deemed an unreasonable provision, as after the plans are filed all bona fide operations should easily get that far within the time specified.

V

WHAT KINDS OF HOUSES CAN BE BUILT UNDER
THE MODEL LAW?

V

WHAT KINDS OF HOUSES CAN BE BUILT UNDER THE MODEL LAW?

THE first question which will be asked in every community where a new housing law is proposed is "What effect will this law have on building operations?" Is it possible to build under the more rigorous requirements of such an act houses which will be commercially profitable and yet at the same time be the kind of house that the public demands?

The first impression which interests adversely affected will seek to convey is that the law is impracticable and that it will stop building operations in that city, that the cost of building will be greatly increased thereby, and that people will not be able to afford the kind of house which the law calls for.

Great emphasis will undoubtedly be laid upon the fact that the requirements of the law are so much more stringent as to the open spaces that have to be left and the restrictions placed upon the percentage of lot that may be occupied, the larger yards required and the more ample courts, that it will not be possible to construct under such a law buildings which will be commercially profitable.

It is vitally important, therefore, that the housing reformer should know at once whether these claims are sound or not. He must be in a position to show to the community that they have no basis in fact and that it will be possible to build under the requirements of the new law houses of all kinds which will be commercially profitable and at the same time will not involve any material increase in rents or in cost of construction.

Is it possible to show this, and how best can this be demonstrated?

The most practicable way to demonstrate it is to draw plans showing the various kinds of buildings that can be built on different

sized lots. It should be borne in mind that this should be demonstrated with regard to two main groups of houses, (1) the detached house and (2) houses built in continuous rows or groups.

The conditions which relate to the two classes are naturally very different and the types of plans that can be evolved will differ similarly.

Under each one of these classes it is necessary to consider also what is possible in the way of development in each *kind* of building; namely, the private dwelling, the two-family house, and the multiple dwelling; that is, the tenement house, the flat and the apartment house. It is also necessary to know what developments are possible in all these classes of buildings, of both groups, on lots of different width; namely, on lots 40 feet wide, and on lots 50 feet wide, as well as on lots 25 feet or less in width. We should also know what is possible on lots of varying depth. What may be possible on a lot 150 feet deep may not be practicable on a lot but 60 feet in depth, so one should be in a position to show what can be done on property 60 feet, 100 feet and even 150 and 200 feet deep.

The author has attempted to meet all these questions and to show in the form of outline plans illustrating the style of house and its "disposition" on the lot, the various things that can be done in all of these various circumstances. It should be clearly borne in mind that the plans thus outlined in no sense represent the *only* disposition that can be had, but merely one method of treatment. There are many other alternatives.

No attempt has been made to show the interior arrangement of the rooms in the house. With a building of a certain width and length it is easy for any architect, or in fact for those who are not architects, to adapt the customary plan in each community to such an outline.

Take, for example, Figure 48 showing a detached house on a lot 40 feet wide and 100 feet deep. Under the requirements of this law this house can be built in the centre of the plot and can be 30 feet wide by 80 feet deep, with a side yard 5 feet wide on each side of it. It is obvious at a glance that it is possible for the architect to get in a building of such size any disposition or arrangement of the interior that may be desired either for a million-

HOUSES BUILT UNDER MODEL LAW

aire's mansion, a two-family house, the humble cottage of the workingman, a cheap tenement with several families on a floor, or a high-grade apartment house.

As an aid to a quick understanding of the various provisions which control the type of house that may be built, the following summary table showing the different points that must be observed is submitted, as this matter must be considered in connection with the provisions with reference to percentage of lot occupied; size of rear yards, size of side yards, size of courts, and distance between buildings where there is more than one building on a lot. All of these requirements except those relating to percentage of lot vary with the height of the building, and two of them, namely, the sizes of rear yards and the percentage of lot requirements, vary also according to the depth of the lot.

SIDE YARDS AND COURTS

HEIGHT OF BUILDING	SIDE YARD WIDTHS				COURTS		
	Private Dwelling		2 Family & Multiple Dws.		Width	Inner Minimum Length	Outer Maximum Length
	On Own Lot	Bet. Bldgs.	On Own Lot	Bet. Bldgs.			
1 story (10 ft.) . . .	3 ft.	6 ft.	4 ft.	8 ft.	3½ ft.	6½ ft.	13½ ft.
1½ story (20 ft.) . . .	4 ft.	8 ft.	5 ft.	10 ft.	6½ ft.	13½ ft.	26½ ft.
2 story (20 ft.) . . .	4 ft.	8 ft.	5 ft.	10 ft.	6½ ft.	13½ ft.	26½ ft.
2½ story (30 ft.) . . .	5 ft.	10 ft.	6 ft.	12 ft.	10 ft.	20 ft.	40 ft.
3 story (30 ft.) . . .	5 ft.	10 ft.	6 ft.	12 ft.	10 ft.	20 ft.	40 ft.
4 story (40 ft.) . . .	6 ft.	12 ft.	7 ft.	14 ft.	13½ ft.	26½ ft.	53½ ft.
5 story (50 ft.) . . .	7 ft.	14 ft.	8 ft.	16 ft.	16½ ft.	33½ ft.	66½ ft.
6 story (60 ft.) etc. . .	8 ft.	16 ft.	9 ft.	18 ft.	20 ft.	40 ft.	80 ft.

REAR YARDS (MEASURED TO MIDDLE OF ALLEY)

HEIGHT OF BUILDING	DEPTH OF LOTS (INTERIOR LOTS)							
	40 ft.	50 ft.	60 ft.	100 ft.	125 ft.	150 ft.	200 ft.	250 ft.
1 story 10% . . .	10 ft. min.	10 ft. min.	10 ft. min.	10 ft.	12½ ft.	15 ft.	20 ft.	25 ft.
2 story 15% . . .	10 ft. min.	10 ft. min.	10 ft. min.	15 ft.	18¾ ft.	22½ ft.	30 ft.	37½ ft.
3 story 20% . . .	10 ft. min.	10 ft.	12 ft.	20 ft.	25 ft.	30 ft.	40 ft.	50 ft.
4 story 25% . . .	10 ft.	12½ ft.	15 ft.	25 ft.	31¼ ft.	37½ ft.	50 ft.	62½ ft.
5 story 30% . . .	12 ft.	15 ft.	18 ft.	30 ft.	37½ ft.	45 ft.	60 ft.	75 ft.
6 story 35% etc. . .	14 ft.	17½ ft.	21 ft.	35 ft.	43¾ ft.	52½ ft.	70 ft.	87½ ft.

A MODEL HOUSING LAW

PERCENTAGE OF LOT—INTERIOR LOTS

DEPTH OF LOT	PERCENTAGE OF LOT
Up to 60 ft.	70%
60-105 ft.	65%
105-155 ft.	55%
155-205 ft.	50%
Over 205 ft.	40%

Let us consider first the detached type of house. In many cities the general custom is to place such a building in the centre of the plot and leave a side yard on each side of it. The builder of the neighboring house, as a rule, adopts a similar practice so that each person has the advantage of the spaces thus joined together, making the distance between the houses twice as much as it would ordinarily otherwise be. Figures 47-53 (pages 307-313) show the various methods of treatment possible in the case of private dwellings not exceeding two stories and attic in height. For such buildings under the provisions of this law a side yard not less than 5 feet in width would have to be left on either side of the building. With a lot 40 feet wide and a side yard 5 feet wide on each side of it, it is possible to build the house 30 feet in width. This gives an ample house for all kinds of buildings. It is sufficiently wide for the mansion of the well-to-do citizen, it is sufficiently wide for a two-family dwelling, one family upstairs and one down, and it is sufficiently wide for a high-class apartment house or a cheap tenement, though of course a larger lot, especially one 50 feet in width, will afford a much better treatment and prove more satisfactory. In laying out property divisions in new portions of a city it would be far better to make the lot units 50 feet in width, especially in high-class residence districts, but lots 40 feet in width will give very satisfactory results.

No attempt has been made to show the treatment possible on lots 50 feet in width, as it is at once obvious that all the things that are possible on the 40-foot lot are possible in this case as well, only the owner has 10 extra feet in width to dispose of which he can use either in making his building 40 feet wide instead of 30 feet, or can enlarge his side yards, as he pleases. So far as the law is concerned, the conditions which govern would make no change in the disposition of a lot of this greater width. The plans,

therefore, which are submitted for the 40-foot lot should be deemed to apply equally to the 50-foot lot.

Seven different treatments are offered for consideration. It is shown first (Figure 47) what is possible on a lot of very narrow depth, say even not more than 60 feet in depth. There are such lots in many cities, "tail-enders" as they are called. Even with this small plot it is possible to build an excellent type of house; namely, a house 30 feet by 48 feet, built up to the line in front, with a side yard on either side and with a rear yard 12 feet in depth, the minimum required by the law. A building 30 feet by 48 feet will give a very attractive house in the case of both a private dwelling and a two-family house and it will be even possible to build a satisfactory tenement house on this plot.

When we take the ordinary type of lot which prevails in most cities, the lot 100 feet in depth, it is at once seen how easy it is to develop such property advantageously. Here two alternatives are presented. In the first case (Figure 48) but one building is shown on the plot. Under this disposition it would be possible to build a house 30 feet wide and 80 feet deep with a back yard 20 feet in depth, the minimum required by law, and with a side yard on each side of the house 5 feet in width. Few people would wish to build a private dwelling 80 feet deep. There would also be few cases where it would be desired to build even a two-family dwelling that depth, though it might be advantageous in building an apartment house or tenement house to utilize this larger space. The disposition which would be had most generally would be that shown in Figure 49, where a garage is placed on the rear of the lot. Here, as will be seen, it is possible to have the house 30 feet by 55 feet, to have a rear yard 20 feet in depth or have the house 65 feet and a 10-foot yard between it and the garage, the minimum required by the law, and then at the rear a garage 25 feet by 30 feet, leaving a space of 10 feet on one side of the garage, at the rear, for a driveway if that is desired.

An alternative to this plan not shown in any of the diagrams would be in cases where no garage is desired and where a front yard is desired, to set back the house, leaving a front yard 25 feet in depth and the full width of the plot. Under this arrangement we should have a house as in Figure 49, 30 by 55 feet, a front yard 25

by 40 feet, a rear yard 20 by 40 feet and two side yards each 5 feet in width and extending along the entire depth of the house. This would give a very desirable house both in the case of a private dwelling and a two-family dwelling.

When we come to lots of greater depth, namely, the lot 150 feet deep, it is at once obvious that even more advantageous treatment from the point of view of the use of the property is afforded. Figure 50 shows that with such a lot it is possible to build a house 30 feet by 85 feet in depth, to have a garage at the rear 25 feet by 30 feet in size and to have a 40-foot yard between them. Or instead of this, the depth of the house can be cut down if it is desired to have a front yard and the building set back from the street 25 feet or whatever amount is desired (as shown in Figure 51) and the house reduced to 60 feet in depth, which would be a deeper house than would naturally be desired either for a private dwelling or two-family house.

Similarly with regard to lots 200 feet deep. Figure 52 shows that with such a lot we could build our house 30 feet by 108 feet, have a garage at the rear, and leave a 67-foot yard between the two, a yard 27 feet more than the law would require. Or instead of this, a front yard could be left in front, say 30 feet in depth, the house be made 30 feet by 95 feet, the garage 25 feet by 30 feet, with a yard 50 feet deep between the house and garage (Figure 53).

It is evident from a study of these plans that there is not the slightest difficulty from any point of view, under the provisions of the Model Law, in developing a plot 40 feet in width with a detached house which will be commercially profitable and at the same time in accordance with the desires of the people who are to live in it and with the habits of the community.

This is true so far as the two-story and attic building is concerned and applies to all classes of buildings, the private dwelling, the two-family dwelling, and to the multiple dwelling; namely, the tenement house, the flat and the apartment house.

But, it may be asked, although this can be done with a building two stories and attic in height, is it feasible with the three-story and attic building, the type which is more common in many of our cities? The answer is unquestionably, Yes. The following

seven diagrams (Figures 54-60) show that even in this case it is easily practicable to build every class of house desired on a lot unit of 40 feet in width, on lots of varying depth, namely, 60 feet, 100 feet, 150 feet, and 200 feet, and have the buildings three stories and attic in height. The types of houses that can be built are practically identical with the houses that are possible in the plans which have been presented in the case of the two-story and attic house (Figures 47-53). The only difference is that in this case the side yards must be 6 feet wide instead of 5 feet wide. This means that the house can be but 28 feet in width instead of 30 feet. This is not at all too narrow to give satisfactory results even in the case of a private dwelling or two-family house or even a multiple dwelling.

Taking up these plans in detail and commenting briefly on them we find the following possibilities for the three-story and attic house on the 40-foot lot.

On a 60-foot lot we may have a house 28 feet by 45 feet with a back yard 15 feet deep (Figure 54); on a lot 100 feet deep we may have a house 28 feet by 75 feet with a back yard 25 feet in depth, the minimum (Figure 55); or if we do not desire a house as deep as this, as this is deeper than would be generally desired in the case of private dwellings and two-family houses at all events, it would be possible to have a garage at the rear of the lot 25 feet by 30 feet and to have our house 28 feet by 50 feet, with a 25-foot yard between them, the minimum depth (Figure 56); or if no garage is desired and it is wished to set back the house from the building line and have a front yard, it would be possible to have a front yard 25 feet by 40 feet, a house 28 feet by 50 feet, and a back yard of 25 feet. (Under the provisions of Section 30 only 10 feet would have to be left between the house and the garage). On lots 150 feet deep it is possible to have a house 28 feet by 85 feet, with a garage 25 feet by 30 feet at the rear and a 40-foot yard between the two, slightly more than the minimum (Figure 57). (Under the provisions of Section 30 only 10 feet would have to be left between the house and the garage). Or if a house of this great depth is not desired, it is possible to set back the house from the building line 25 feet, have a front yard of that depth, a building 28 feet by 60 feet, a garage at the rear 25 feet by 30 feet, and

a 40-foot yard between the two buildings (Figure 58). (Under the provisions of Section 30 only 10 feet would have to be left between the house and the garage). With a lot 200 feet in depth we may obtain a house 28 feet by 116 feet, a garage at the rear 25 feet by 30 feet, with a 59-foot yard between the two, 9 feet more than the minimum (Figure 59). (Under the provisions of Section 30 only 10 feet would have to be left between the house and the garage). There is probably no instance where anyone would desire a house of this excessive depth, not even in the case of apartment houses or tenement houses, and the more usual treatment would be to have a large front yard instead of extending the building back so far upon the lot. Under such a treatment we could have a front yard 30 feet by 40 feet, a house 28 feet by 95 feet, a garage at the rear 25 feet by 30 feet, and a rear yard between the two of 50 feet, the minimum (Figure 60). (Under the provisions of Section 30 only 10 feet would have to be left between the house and the garage).

It is obvious from a consideration of these plans that in the case of the three-story and attic detached house on a 40-foot lot, no matter what the depth of the lot may be, there is not the slightest difficulty in building a house that will be a commercial success and the kind of house that the people want.

If these results affording the most generous use of space from the point of view of the builder and owner are feasible on lots 40 feet in width, it is obvious at once that with a larger lot unit, that is, 50 feet or more, it will be possible to obtain even more satisfactory results. No attempt has been made to show what would be possible with houses that are intended to be four stories in height. A four-story private dwelling is seldom built and should be discouraged. A four-story two-family dwelling is unknown. When it comes to apartment houses and tenement houses the four-story house will appear more frequently. The same method of treatment is possible with the four-story house, except that the side yards would have to be 7 feet wide instead of 6 feet and the yards would have to be of a greater depth, depending upon the depth of the lot as well as upon the height of the building.

What has been said shows conclusively that the law will work in practice on lots 40 feet or more in width, but it may be

asked "What is to be done with the small lot—lots but 30 or 25 feet wide?" Is it possible to build houses on such lots that will be commercially successful and yet will comply with the law?

Here the answer is not so easy. It must be frankly admitted that it is not possible on a 25-foot lot to place a detached house in the centre of the plot and leave an adequate side yard on *each* side of it. In the case of a two-story building each side yard would have to be 4 feet wide. This would leave but 17 feet for the house, which would not be wide enough, except in the case of workmen's houses of a particular type.

Similarly with three-story buildings, each side yard would have to be 5 feet wide, leaving but 15 feet for the building. One could not build a building 15 feet wide that would be practicable, though it is true there are hundreds of thousands of buildings in the city of Philadelphia which do not exceed 15 feet in width.

We must however at once dismiss as impracticable the idea of building houses 15 and 17 feet wide. The people of most cities would so consider it.

Does this mean, therefore, that it will not be possible to build on such a plot a house that will be commercially profitable and at the same time meet the desires of the people?

There is no doubt that a house of this kind can be built, but it will involve some changes in the habits of the people in a number of cities. In many cities it is the habit to build the houses in the middle of the lot, devoting the space that is left on either side to use as a side yard. In some cities this is not the custom but instead the custom is to build one side of the house up to the lot line and to leave the space that is left for side yards entirely on the other side. Where this is done and houses are built on this plan under a tacit agreement by the adjacent property owners, often very excellent results are obtained.

This is the only type of *detached* dwelling that is possible on a lot 25 feet wide; namely, a single side yard on one side of the building and the house built up to the lot line on the other side. This would give on a 25-foot lot, in the case of two-story houses, a house 21 feet wide, and in the case of three-story and attic buildings a house 20 feet wide with a side yard 4 feet wide in the first case and a side yard 5 feet wide in the second. Figures 61-67

show the kinds of houses that would be possible in the case of a three-story and attic building on lots of various depths; namely, 60, 100, 150, and 200 feet deep. In each case a side yard 6 feet wide is left on one side of the building and the other side of the plot is built up to the lot line, giving in every instance houses 19 feet in width. This will make a very good house. There will be no practical difficulties so far as the law is concerned in securing adequate light and ventilation for the various rooms. In most cases the majority of the rooms will front on the street and yard. The other rooms will face on the side yard and the "dead end" of the house will be used for the hallway. It does not mean necessarily that this hallway will be dark, as it will be possible to open supplementary windows in the dead wall where the owner of the adjoining property leaves a side yard on that side following a general plan, though it would not be lawful to have any *rooms* get their sole light and ventilation from the adjoining property.

Commenting briefly on the plans we note the following possibilities:

On a lot 60 feet deep we can get a house 19 feet by 45 feet with a 15-foot rear yard (Figure 61); on a 100-foot lot we would get a house 19 feet by 75 feet with a 25-foot yard (Figure 62); or a garage at the rear 20 feet by 25 feet, a house 19 feet by 52 feet and a 28-foot yard between them, 3 feet more than the minimum (Figure 63). (Even as little as 10 feet could be left between the garage and the building under Section 30). In the case of lots 150 feet deep it would be possible to have a house 19 feet by 76 feet, with a garage at the rear 25 feet by 25 feet, and a rear yard between the two 49 feet in depth, 12 feet more than the minimum (Figure 64). (Even as little as 10 feet could be left between the garage and the building under Section 30). Or if it is desired to have a front yard on such a lot we could have a front yard 25 feet by 25 feet, a house 19 feet by 60 feet, a garage at the rear 25 feet by 25 feet and a 40-foot yard between them (Figure 65). (Even as little as 10 feet could be left between the garage and the building under Section 30). In the case of lots 200 feet in depth we could build the house 19 feet by 98 feet, have a garage at the rear 25 feet by 25 feet and leave a yard of 77 feet between the two, 27 feet more than the minimum (Figure 66). (Even as little as

10 feet could be left between the garage and the building under Section 30). Or if instead it was desired to have a front yard, we could have a front yard 30 feet by 25 feet, a house 19 feet by 95 feet, a garage at the rear 25 feet by 25 feet and a 50-foot yard between the two (Figure 67). (Even as little as 10 feet could be left between the garage and the building under Section 30).

When it comes to lots less than 25 feet in width it is clearly impracticable to build a detached house on such a lot, and the only thing to do there is to build houses in rows or groups; that is, to build them right up to the line on either side. This is so, irrespective of the provisions of this law. It would be most unwise to build a detached house on such a lot, as it would be impossible to get an adequate open space on either side of it that would furnish sufficient light and which would not be simply a narrow, dark pocket, unsightly and a gathering place for waste material.

In many cases a more advantageous treatment even on the 25-foot lot would be had by this method than could be had with the detached house. In other words, it will be found advantageous to utilize the full frontage of the lot and to build the front at least up to the lot line on either side. This is, of course, the prevailing method of building in the case of apartment houses, flats, and tenements in those portions of a city where land values are high and where street frontage is valuable. It would also be the most advantageous method to employ in the case of two-family houses and even private dwellings in many parts of large cities. In many cities, except on the outskirts, it is often not feasible from the commercial point of view to build workingmen's houses or houses for people of moderate means on any other basis. To utilize all of the lot front and build houses in groups is the only feasible way.

What kind of houses, it may be asked, can be built on 25-foot lots where houses are built in this way without any side yards? Figures 68-74 show what is possible under these circumstances.

The type of house that is there shown is suitable for all classes of dwellings, for the private house, the two-family house and the apartment house. Here especially it should be noted that various kinds of treatment other than those presented are possible. The plans simply show the "dispositions" which have suggested

themselves to the author as feasible and as giving kinds of buildings which would be attractive to live in and commercially successful.

Looking at these plans and commenting briefly upon them we note the following:

On a 60-foot lot it would be possible to build a house 25 feet by 42 feet, leaving a yard of 18 feet at the rear. Such a house, however, could not exceed two rooms in depth, as the rooms would have to open either on the street or on the yard. It would probably not be advantageous, therefore, to build the house as deep as this, but to build it not more than 40 feet deep, leaving a 20-foot yard. But it would be lawful to build as deep as 42 feet if a plan could be developed that the owner would find it advantageous to use (Figure 68).

On a 100-foot lot it would be possible to build a house 25 feet wide by 68 feet deep with an inner lot line court on one side 10 feet by 20 feet and a back yard 32 feet in depth at the rear of the building, 7 feet better than the minimum. This would give a very excellent layout in the case of either a two-family house or a multiple dwelling, as each section of the building between the street and the court, and between the yard and the court, would be about 24 feet in depth, thus permitting the section to be built two rooms deep. Under such an arrangement it would be very easy to get six or seven rooms and bath on each floor after making the necessary allowance for hallways and similar spaces (Figure 69); or if a different treatment were desired and it was felt essential to have a garage at the rear, we might have the following: a house 25 feet by 52 feet with an outer court on one side 10 feet wide by 30 feet long, a rear yard of 28 feet the full width of the lot, and a garage at the rear 20 feet by 25 feet (Figure 70). This would permit an interior arrangement of the house by which five or six rooms and bath could be obtained for each floor, though of course a more advantageous arrangement would be secured by the previous layout.

In the case of a lot 150 feet deep it would be possible to get a house 25 feet wide by 78 feet deep, with a garage at the rear 20 feet by 25 feet and a yard between the two 52 feet in depth, 22 feet more than the minimum (Figure 71). (Even as little as 10

feet could be left between the garage and the building under Section 30). This treatment would involve in the layout an inner court on each side 10 feet by 20 feet with a hallway between the two courts. It would be thus possible to obtain in the front section of the building four rooms each 12 feet by 14 feet in size and similar treatment in the rear section, making 8 rooms per floor. This would make an excellent arrangement either in the case of a two-family dwelling or an apartment house.

If instead of this plan it were desired to have a front yard, it would be possible to arrange the building on the lot so as to leave a front yard of 20 feet in depth, have the building 70 feet in depth, a garage at the rear 20 feet by 25 feet, and a rear yard of 40 feet between the two, 10 feet more than the minimum (Figure 72). (Even as little as 10 feet could be left between the garage and the building under Section 30). This would involve the use of a side inner court 10 feet wide by 20 feet long. Under this plan it would be possible to get eight or more rooms per floor with the hall running along the dead end of the building.

With a lot 200 feet deep a building 25 feet by 95 feet could be obtained, with a garage at the rear 25 feet by 25 feet and a rear yard between the two buildings of 80 feet, 40 feet more than the minimum (Figure 73). (Even as little as 10 feet could be left between the garage and the building under Section 30). This would involve the use of two inner side courts, each 10 feet wide and 25 feet long, with the hallway of the building located between the two courts; making a treatment by which in the front section of the building it would be possible to obtain four rooms each 12 feet by 17 feet in size and a similar arrangement at the rear, thus making eight rooms per floor; or if it was desired to utilize a front yard and set the building back, it would be possible to have a front yard of 30 feet by 25 feet, with the building necessarily the same as before; namely, 25 feet by 95 feet, with eight rooms per floor, a garage at the rear 25 feet by 25 feet, and a rear yard of 50 feet between them, 10 feet more than the minimum (Figure 74). (Even as little as 10 feet could be left between the garage and the building under Section 30).

It is obvious from a study of these plans that even on lots of this narrow width of 25 feet it is possible, in the case of houses

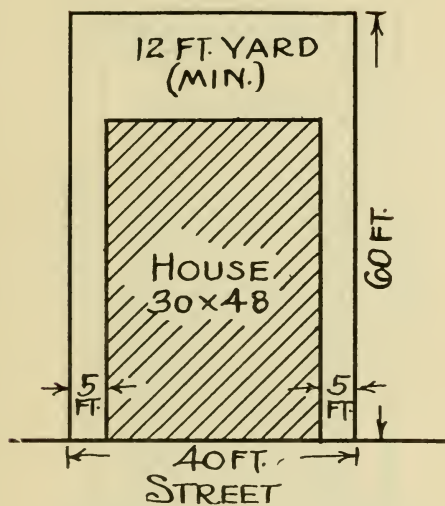
built in continuous rows, both private houses, two-family houses, and multiple dwellings, to build houses that would be unquestionably profitable from a commercial point of view and would give an advantageous arrangement of the rooms both from the point of view of light and ventilation and also of convenience of arrangement, as well as from the points of view of comfort and what people are accustomed to. It probably will mean, however, that the stereotyped kinds of buildings which are in existence in many cities will have to be changed somewhat and there will therefore at once be opposition. The builder who is building from a plan that he bought from an architect ten years ago will object to going to an architect now to have a new plan made. He will be wedded to the kind of house that he has been building and will object to any change. Similarly, the architect may be slow to see the opportunities that exist and may not have sufficient inventive faculty to lay out types of plans that will produce the best results, but such change is involved in any law which makes for progress. If the present types of houses were satisfactory no change in the law would be necessary.

When it comes to building houses in continuous rows on lots of a greater width than 25 feet of course more advantageous treatment can be obtained.

To sum up: On lots 40 feet or over in width detached houses on any depth of lot can be built under this law which will be commercially profitable, private dwellings, two-family dwellings, and multiple dwellings of all kinds.

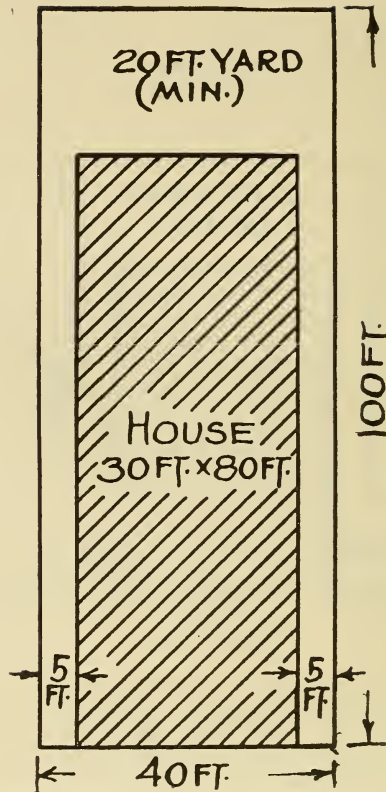
On lots of less than 40 feet in width the detached house is not so advantageous, though it is still possible on lots as narrow as 25 feet in width. On anything less than this, however, the detached house is impracticable, and houses built in rows or groups are the only thing to consider.

FIGURE 47
TWO-STORY AND ATTIC



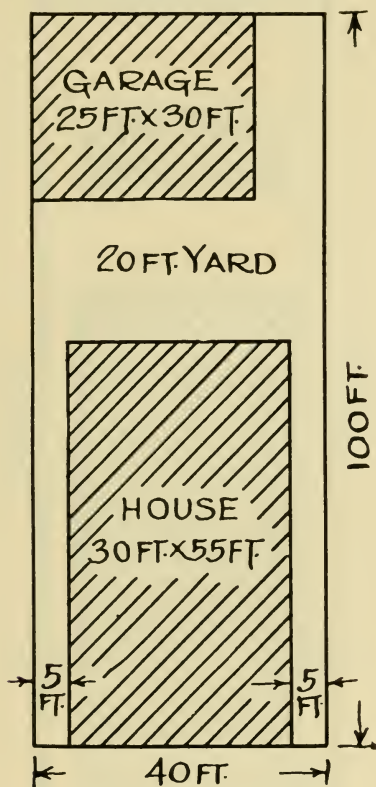
Detached Houses on 40 ft. Lots
 Lot 60 ft. deep
 Occupies 60 per cent of lot
 Legal maximum 70 per cent of lot

FIGURE 48
TWO-STORY AND ATTIC



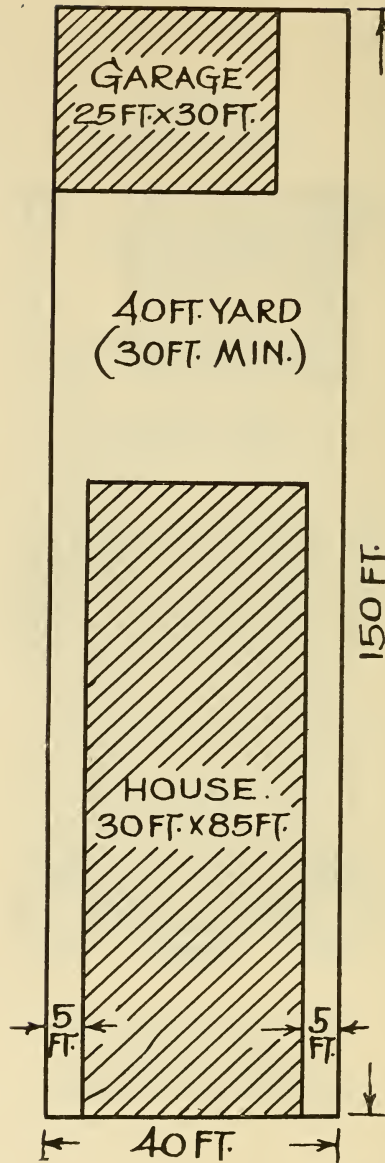
Detached Houses on 40 ft. Lots
Lot 100 ft. deep
Occupies 60 per cent of lot
Legal maximum 60 per cent of lot

FIGURE 49
TWO-STORY AND ATTIC



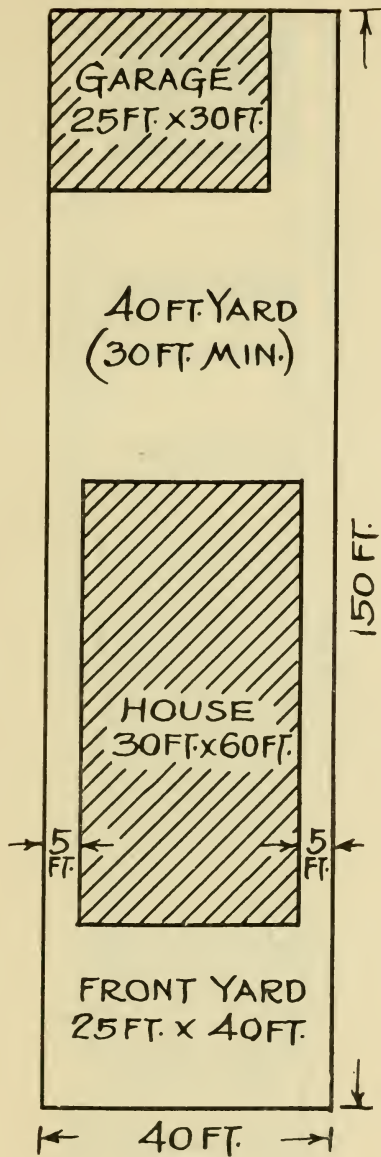
Detached Houses on 40 ft. Lots
 Lot 100 ft. deep
 Occupies 60 per cent of lot
 Legal maximum 60 per cent of lot
 Alternative to Figure 48 with garage

FIGURE 50
TWO-STORY AND ATTIC



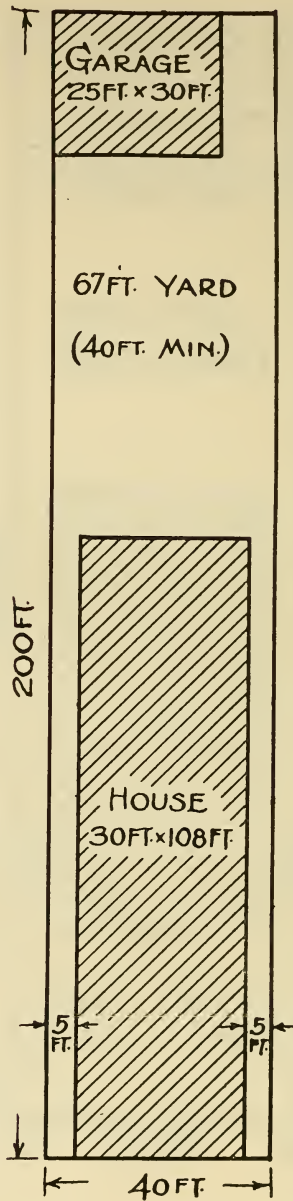
Detached Houses on 40 ft. Lots
Lot 150 ft. deep
Occupies 55 per cent of lot
Legal maximum 55 per cent of lot

FIGURE 51
TWO-STORY AND ATTIC



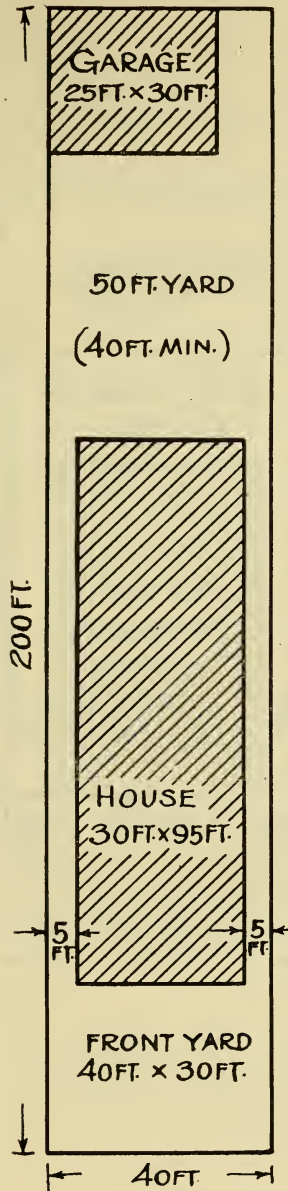
Detached Houses on 40 ft. Lots
 Lot 150 ft. deep
 Occupies 55 per cent of lot
 Legal maximum 55 per cent of lot
 Alternative to Figure 50 with front set-back

FIGURE 52
TWO-STORY AND ATTIC



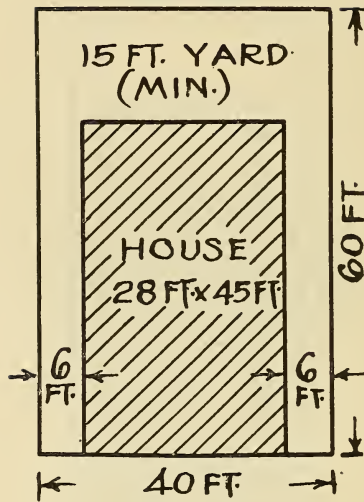
Detached Houses on 40 ft. Lots
 Lot 200 ft. deep
 Occupies 50 per cent of lot
 Legal maximum 50 per cent of lot

FIGURE 53
TWO-STORY AND ATTIC



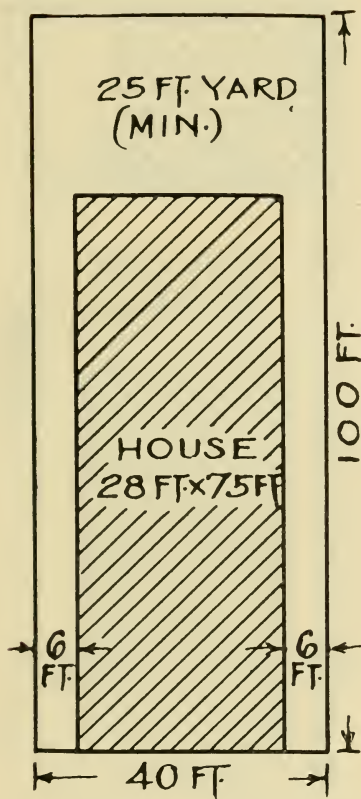
Detached Houses on 40 ft. Lots
 Lot 200 ft. deep
 Occupies 45 per cent of lot
 Legal maximum 50 per cent of lot
 Alternative to Figure 52 with front set-back

FIGURE 54
THREE-STORY AND ATTIC



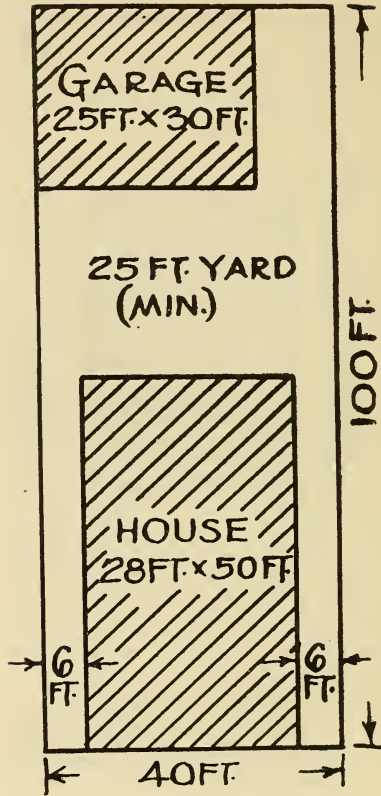
Detached Houses on 40 ft. Lots
 Lot 60 ft. deep
 Occupies $52\frac{1}{2}$ per cent of lot
 Legal maximum 70 per cent of lot

FIGURE 55
THREE-STORY AND ATTIC



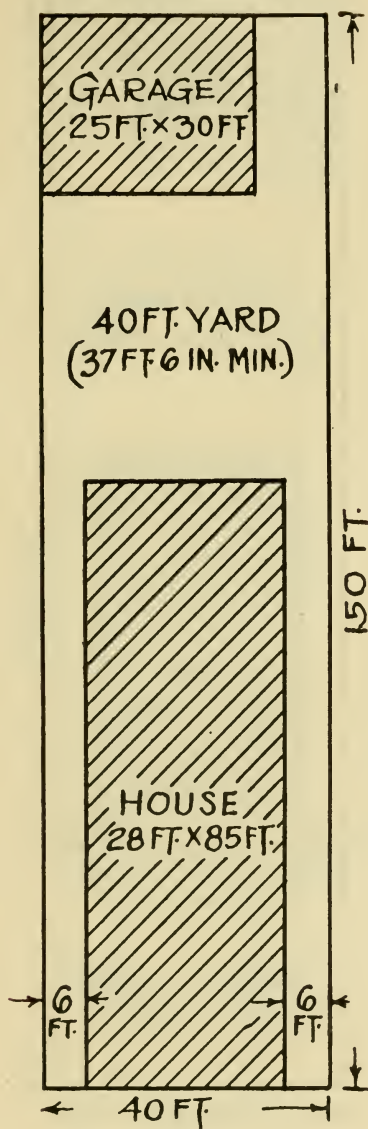
Detached Houses on 40 ft. Lots
 Lot 100 ft. deep
 Occupies $52\frac{1}{2}$ per cent of lot
 Legal maximum 60 per cent of lot

FIGURE 56
THREE-STORY AND ATTIC



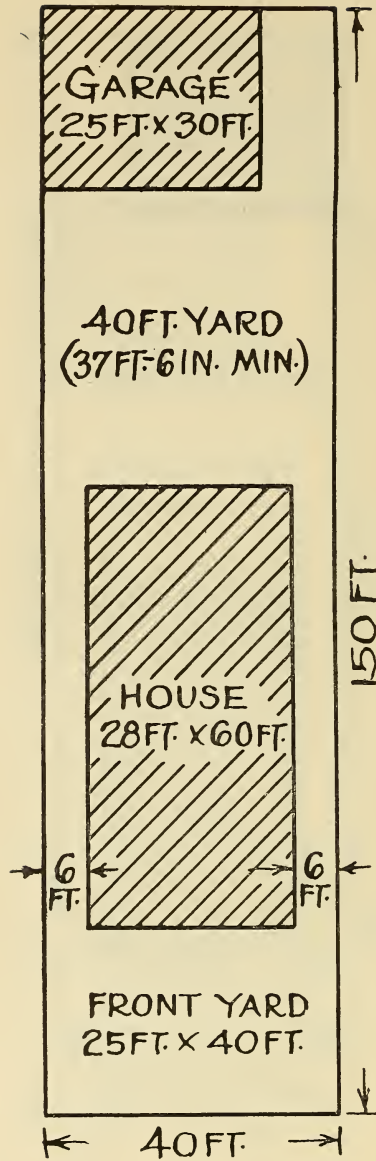
Detached Houses on 40 ft. Lots
 Lot 100 ft. deep
 Occupies 54 per cent of lot
 Legal maximum 60 per cent of lot
 Alternative to Figure 55 with garage

FIGURE 57
THREE-STORY AND ATTIC



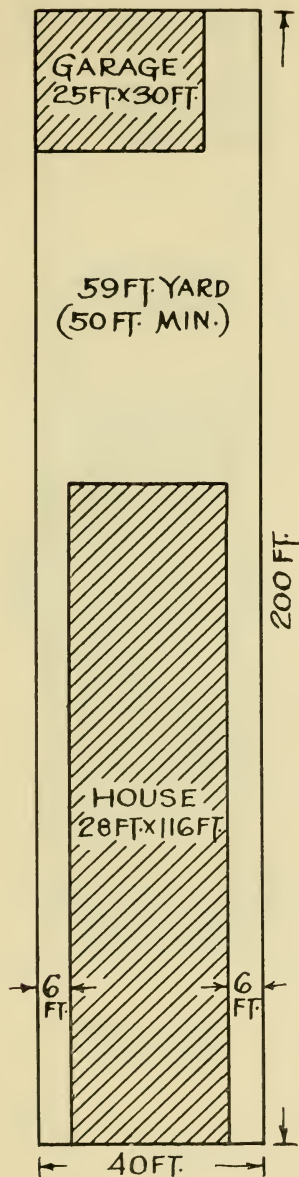
Detached Houses on 40 ft. Lots
 Lot 150 ft. deep
 Occupies 50 per cent of lot
 Legal maximum 55 per cent of lot

FIGURE 58
THREE-STORY AND ATTIC



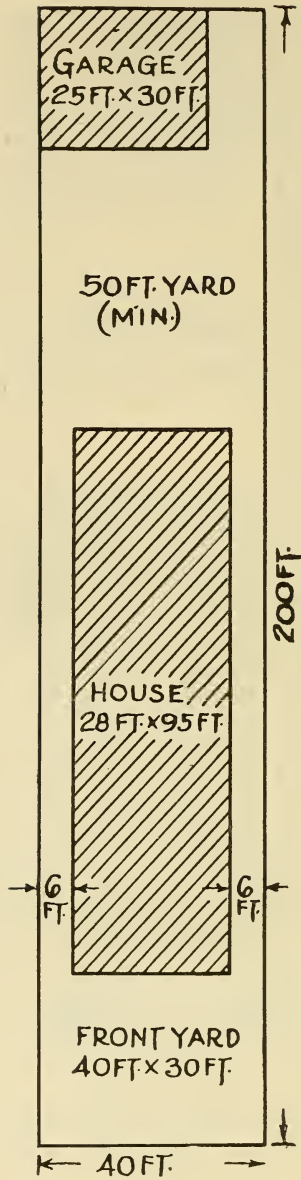
Detached Houses on 40 ft. Lots
Lot 150 ft. deep
Occupies 40 per cent of lot
Legal maximum 55 per cent of lot
Alternative to Figure 57 with front set-back

FIGURE 59
THREE-STORY AND ATTIC



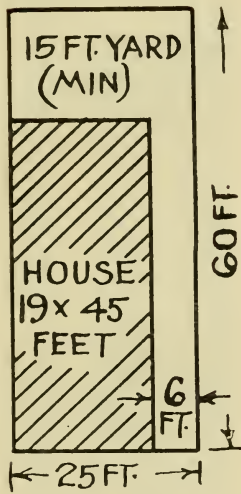
Detached Houses on 40 ft. Lots
 Lot 200 ft. deep
 Occupies 50 per cent of lot
 Legal maximum 50 per cent of lot

FIGURE 60
THREE-STORY AND ATTIC



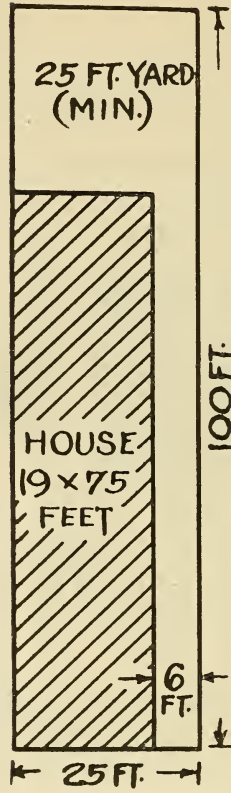
Detached Houses on 40 ft. Lots
 Lot 200 ft. deep
 Occupies $42\frac{1}{2}$ per cent of lot
 Legal maximum 50 per cent of lot
 Alternative to Figure 59 with front set-back

FIGURE 61
THREE-STORY AND ATTIC



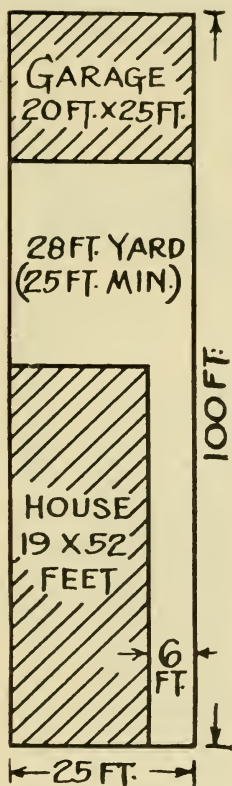
Detached Houses on 25 ft. Lots
 Lot 60 ft. deep
 Occupies 57 per cent of lot
 Legal maximum 70 per cent of lot

FIGURE 62
THREE-STORY AND ATTIC



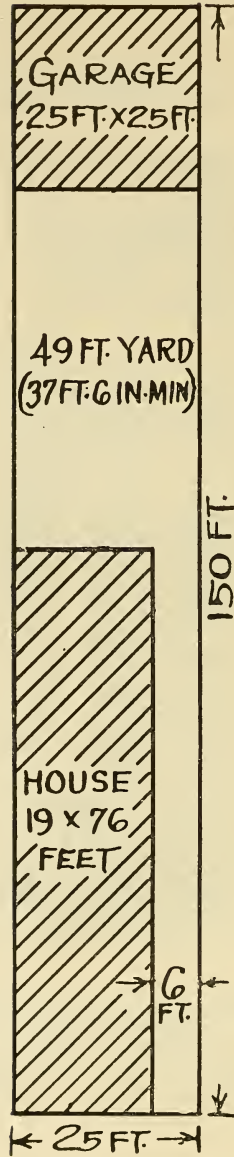
Detached Houses on 25 ft. Lots
 Lot 100 ft. deep
 Occupies 57 per cent of lot
 Legal maximum 60 per cent of lot

FIGURE 63
THREE-STORY AND ATTIC



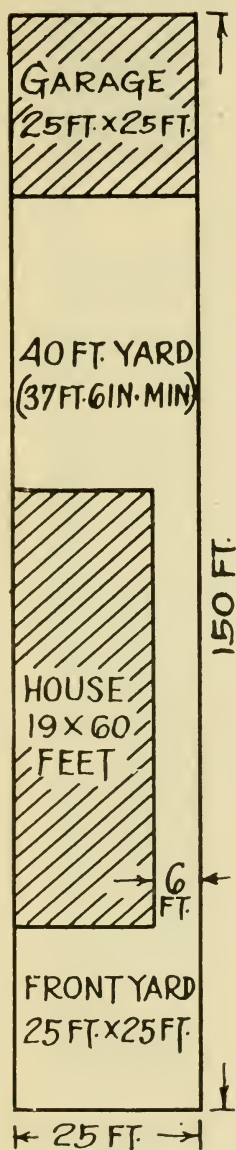
Detached Houses on 25 ft. Lots
 Lot 100 ft. deep
 Occupies 60 per cent of lot
 Legal maximum 60 per cent of lot
 Alternative to Figure 62 with garage

FIGURE 64
THREE-STORY AND ATTIC



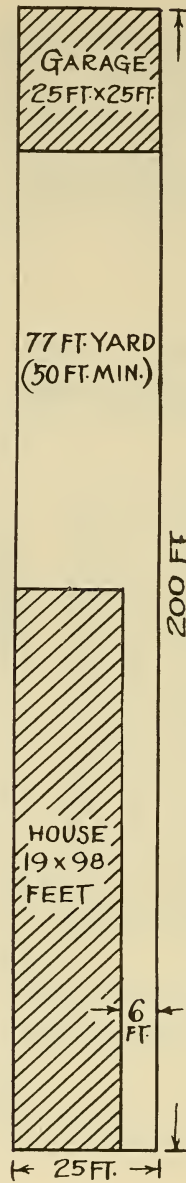
Detached Houses on 25 ft. Lots
 Lot 150 ft. deep
 Occupies 55 per cent of lot
 Legal maximum 55 per cent of lot

FIGURE 65
THREE-STORY AND ATTIC



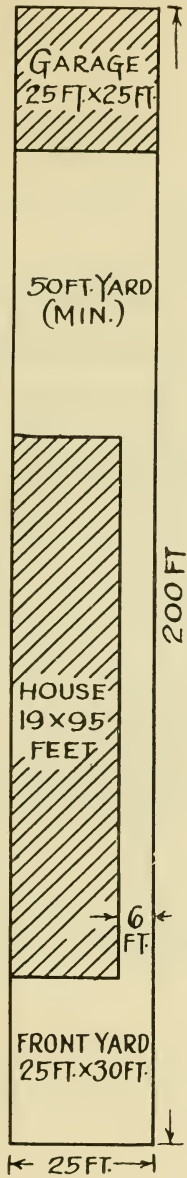
Detached Houses on 25 ft. Lots
 Lot 150 ft. deep
 Occupies 47 per cent of lot
 Legal maximum 55 per cent of lot
 Alternative to Figure 64 with front set-back

FIGURE 66
THREE-STORY AND ATTIC



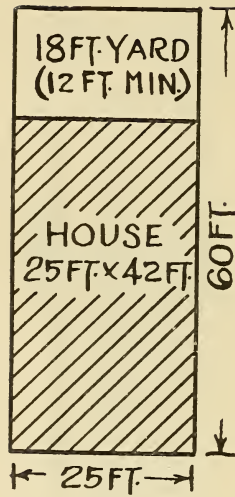
Detached Houses on 25 ft. Lots
 Lot 200 ft. deep
 Occupies 49+ per cent of lot
 Legal maximum 50 per cent of lot

FIGURE 67
THREE-STORY AND ATTIC



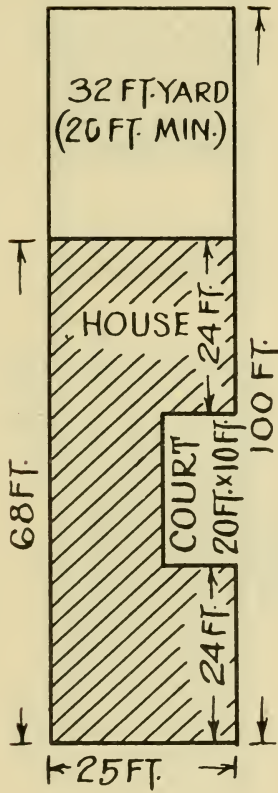
Detached Houses on 25 ft. Lots
 Lot 200 ft. deep
 Occupies 48+ per cent of lot
 Legal maximum 50 per cent of lot
 Alternative to Figure 66 with front set-back

FIGURE 68
THREE-STORY



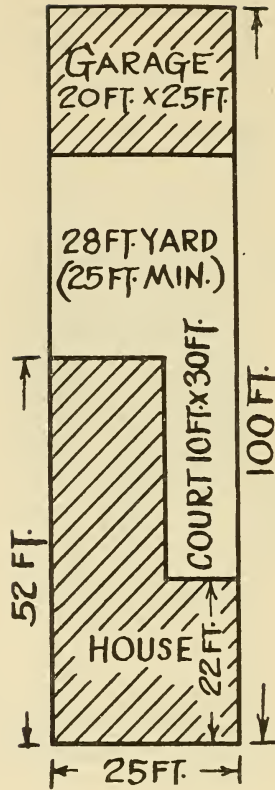
Continuous Rows or Groups on 25 ft. Lots
Lot 60 ft. deep
Occupies 70 per cent of lot
Legal maximum 70 per cent of lot

FIGURE 69
THREE-STORY



Continuous Rows or Groups on 25 ft. Lots
 Lot 100 ft. deep
 Occupies 60 per cent of lot
 Legal maximum 60 per cent of lot

FIGURE 70
THREE-STORY



Continuous Rows or Groups on 25 ft. lots

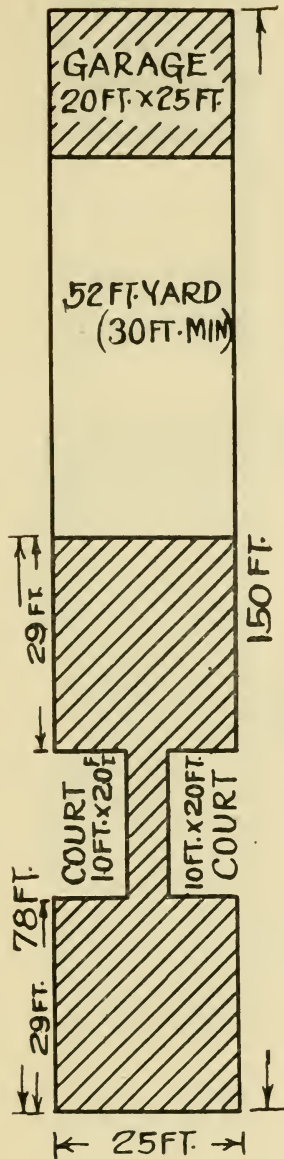
Lot 100 ft. deep

Occupies 60 per cent of lot

Legal maximum 60 per cent of lot

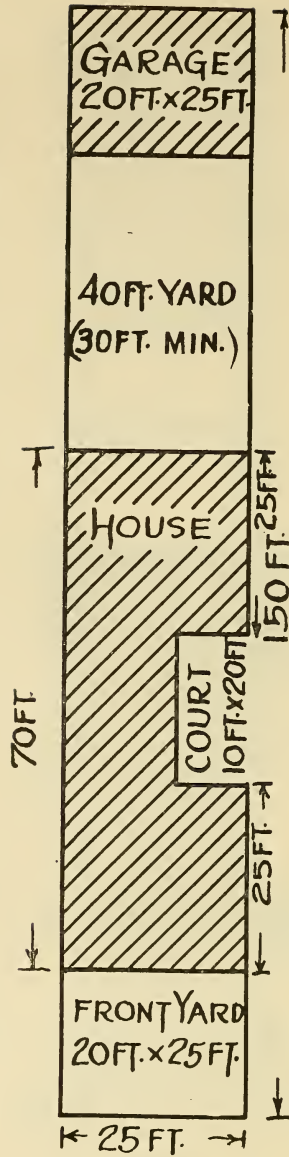
Alternative to Figure 69 with garage

FIGURE 71
THREE-STORY



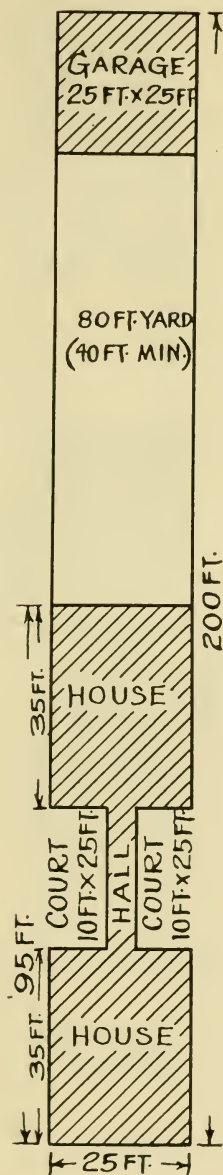
Continuous Rows or Groups on 25 ft. Lots
 Lot 150 ft. deep
 Occupies 55 per cent of lot
 Legal maximum 55 per cent of lot

FIGURE 72
THREE-STORY



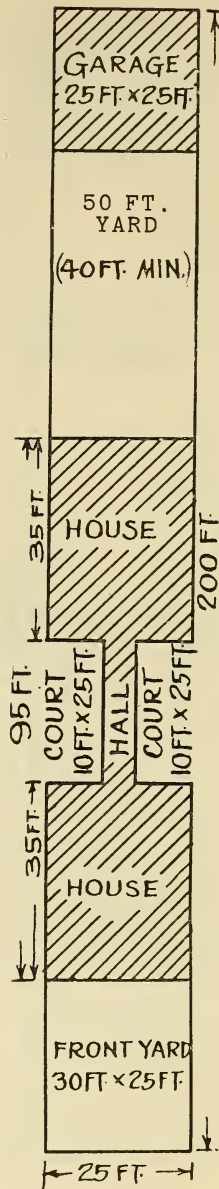
Continuous Rows or Groups on 25 ft. Lots
 Lot 150 ft. deep
 Occupies 55 per cent of lot
 Legal maximum 55 per cent of lot
 Alternative to Figure 71 with front set-back

FIGURE 73
THREE-STORY



Continuous Rows or Groups on 25 ft. lots
 Lot 200 ft. deep
 Occupies 50 per cent of lot
 Legal maximum 50 per cent of lot

FIGURE 74
THREE-STORY



Continuous Rows or Groups on 25 ft. Lots
 Lot 200 ft. deep
 Occupies 50 per cent of lot
 Legal maximum 50 per cent of lot
 Alternative to Figure 73 with front set-back

VI

AN IDEAL HOUSING LAW

VI

AN IDEAL HOUSING LAW

AN ideal situation as to the light and ventilation of all future dwellings would result if we could adopt in America the practice which is quite general in Great Britain; namely, of having no buildings used for residence purposes exceed two rooms in depth, each group of rooms thus extending from the street to the yard, a generous yard being left at the back of the building. Under this plan every room and public hall, in fact, every part of the building, would open either on the street or on this large back yard. Such conditions are ideal. It would mean that we would have no courts or air-shafts or similar makeshifts for direct light and air.

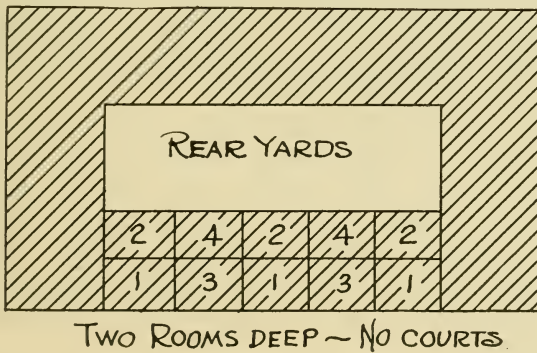


FIGURE 75

A most important step in this direction was taken in the "Standards for Permanent Construction" adopted by the U. S. Department of Labor in March, 1918, already

referred to several times in this book. Here, in the standards for tenement houses, flats and apartments (Type 8) it is provided:

"Buildings are not to be more than 2 rooms deep. This means either that rooms shall open on the street or on a rear yard or on an interior park sufficiently large for grass and trees to grow in it and of a sufficient size to admit direct sunshine into all rooms opening on it, at some period of the day, except rooms with northerly exposure."

While it was easily practicable for the Federal Government to adopt Standards like these for the 200 million dollars' worth of workingmen's dwellings that were built by it for the housing of war workers, it is a nice question whether our courts would sustain the mandatory requirement of a statute which prohibits the erection of dwellings containing courts which it could be shown are sufficient to furnish adequate light and air.

A Housing Law rests in the last analysis on whether it is a *reasonable* exercise of the police power; which, in turn, is based on the health, safety and welfare of the community.

If it can be shown to the satisfaction of our courts that this form of construction, viz., the use of courts, is prejudicial to the health, safety and welfare of the community, such a law would be sustained.

Before this can be brought about in America, however, we shall have to make radical changes in our property divisions. Such a plan requires that property shall be divided into shallow lots and that the present deep lot which prevails in America shall cease to exist. Before this state of affairs is likely to be reached there will undoubtedly be many years of effort in the city planning movement.

This book, however, would not be complete if it did not contain a scheme for adapting the Model Housing Law to such conditions. To bring about these ideal conditions but few changes in the Model Housing Law would have to be made. They are as follows:

AN IDEAL HOUSING LAW

VARIATION 1: Omit Subdivision (7) of Section 2, and **Variation** re-number the subsequent subdivisions accordingly.

VARIATION 2: In Subdivision (16) of Section 2 omit the words "or courts."

VARIATION 3: In Subdivision (18) of Section 2 omit the sentence: "Court walls are exterior walls."

VARIATION 4: Omit Section 25 and substitute the following:

"§ 25. Courts prohibited. There shall be no court or shaft or other unoccupied space on the lot other than a yard. No dwelling hereafter erected shall exceed two rooms in depth from the street to the yard. Each apartment, group or suite of rooms shall extend from the street to the yard."

VARIATION 5: Omit Section 26.

Variation

VARIATION 6: Omit Section 27.

VARIATION 7: Omit Section 28.

VARIATION 8: In Section 29 omit the words "courts or."

VARIATION 9: In Section 31 omit the words "or court."

VARIATION 10: In Section 37 omit the words "or court."

VARIATION 11: In Section 38 omit the words "or court."

VARIATION 12: In Section 47 omit the words "or court."

VARIATION 13: In Section 124 omit the words "or court"; also omit the words "and twenty-five."

VII

THE STANDARDS OF THE FEDERAL GOVERNMENT

VII

THE STANDARDS OF THE FEDERAL GOVERNMENT

ALLUSION has been made in several of the notes to various sections of the Model Housing Law to the Standards adopted by the Federal Government in connection with the industrial housing developments of the U. S. Department of Labor and the U. S. Shipping Board. These standards were adopted by the U. S. Department of Labor under date of March 7, 1918 and have been followed in all essential respects, but with slight variation, by the U. S. Shipping Board as well.

These have so important a bearing on the standards of the country's future housing laws that it has seemed not inappropriate to include them in this book. They should serve as a most valuable example and object lesson to all communities throughout the country which naturally will not wish to have the types of dwellings erected in the future in their communities less desirable than those the Federal Government considers to be appropriate for the housing of industrial workers in war times.

In order that the reasons for the adoption of these standards and their full significance may be appreciated, we are reprinting part of an article by the author of this book published in the Architectural Record of April, 1918.

THE GOVERNMENT'S STANDARDS FOR WAR HOUSING*

ONE of the many interesting and unexpected by-products of the war has been the inauguration in this country of the policy of building workingmen's dwellings by the Federal Government. For years Great Britain and other European countries have carried on such a policy. Although a few persons have urged the adoption of a similar policy in America, America has been slow to follow this suggestion. It has seemed to many that the building of houses for workingmen by the Federal Government was an undue interference with the rights of the individual, and those of a conservative mind have feared greatly the inauguration of such a policy and what might come from it.

But war changes everything. Now, irrespective of what should be the Government's policy in normal or peace times—whether it should follow the example of Great Britain, France, Belgium, Germany and other countries in aiding the building of workingmen's dwellings, or whether it should still continue to hold its former position of aloofness—the exigencies of war have forced the Federal Government to take up the building of workingmen's dwellings. Those in the seats of the mighty have had forced upon them the conclusion that if the war is to be won by the Allies and is not to be drawn out and prolonged indefinitely, a thing, apparently so remote as the housing of the workers, may be a determining factor.

* * * * *

While, of course, the most important function to be performed through the Government's taking over the building of houses for workers in shipyards and war industries resides in the speeding up of the war, there is an important by-product to come out of all this effort which students of housing are vitally interested in.

Every one has recognized that workingmen's dwellings built by the Government, or with Government funds, would influence

* From the Architectural Record, April, 1918.

construction in this field for many years to come. As one observer put it, the Government's action will stamp for the next hundred years the type of house that is to be built for industrial workers. Irrespective of whether this statement is correct or not, there can be no question but that the standards adopted by the Government for the housing of workers will have a potent influence upon the housing of the workingman in this country for many years to come.

Partly because of the recognition of this fact, but primarily because of the recognition of the fact that unless houses of the right kind were built, it would not be possible to attract and *hold* the right kind of workers in many communities, the Housing Administration at Washington has set itself for many months past to the task of formulating standards which should govern in the construction work to be undertaken with governmental funds.

* * * * *

NINE TYPES OF HOUSES

The Standards provide for nine different types of buildings, as follows: the single-family house; the two-family house (one family upstairs—one family down; where two families are side by side with a division wall between, the type is known as the "semi-detached single-family house"); the single-family house with rooms for not more than three lodgers or boarders; lodging house for men; hotel for men; lodging house for women; hotel for women; the tenement house, and the boarding house.

There are some 18 standards or provisions which have been grouped under the title "General Provisions" which are common to all of these types of buildings. In addition there are certain special provisions that have been laid down for each type. Types 1, 2 and 3—viz., the Single-Family House, the Two-Family House and the Single-Family House with rooms for not more than three lodgers or boarders—are grouped together and come under practically the same requirements.

The Lodging House for Men and the Hotel for Men are grouped together and come under practically the same requirements. Similarly with regard to the Lodging House and Hotel for Women. These two types come under practically the same re-

quirements though they differ in some important respects from the requirements for the housing of men. The Tenement House and Boarding House have each their own special requirements.

SIGNIFICANT PRINCIPLES

The significant things in these Standards, some of which really mark revolutionary changes in the housing of workers, are the following:

1. The declaration against the tenement house as a means of housing workers set forth as follows:

"Tenement houses and apartment houses are considered generally undesirable and will be accepted only in cities where, because of high land values, it is clearly demonstrated that single and two-family houses cannot be economically provided, or where there is insistent local demand for this type of multiple housing. In any case, they will be accepted only where the Housing Board is convinced that local conditions require or justify their use. They must conform in general to local building ordinances, to the general provisions of these standards and to other special provisions to be issued by the Housing Board."

2. The requirements for light and ventilation, viz., the enunciation of the principle that in most cases, especially in the case of row or group houses and tenement houses, the houses shall not be more than two rooms deep, thus doing away with long and narrow courts. In fact the court as generally known is outlawed even in the case of tenement houses. For such buildings a treatment with a large interior park is the treatment required.

3. The declaration that there shall be an adequate space between adjacent buildings, that either such side yards shall be adequate or that the houses shall be built in rows or groups. This standard marks a high-water mark in the housing practice of the country and if followed throughout the country will revolutionize present practice. In place of the present inadequate narrow slits and alley-ways—often 3 feet and generally not more than 6 feet between buildings—the new standard requires 20 feet between adjacent buildings and insists upon a minimum of 16 feet. Unless this can be provided the houses must be built in rows.

4. Similarly there has been an equally important recognition

of the importance of an adequate open space between the backs of buildings. The Standards impose a requirement for a minimum distance of 50 feet, with a minimum back yard of 20 feet in all cases. The desirability of set-backs at the front of the house is also recognized.

5. The absolute prohibition of living quarters in basements and cellars.

6. The requirement for through or cross-ventilation. Moving air has come to be the vital principle in the modern science of ventilation.

7. The barring out completely of barracks, bunk houses and dormitories of the usual type and the substitution for them of dormitories housing each man in a separate single room of adequate size.

In addition to these striking and fundamental advances in housing standards there are numerous details, all of which go to make for better living conditions, which mark distinct advances and which will be of material assistance to architects throughout the country in the planning of workingmen's dwellings, irrespective of whether they are to be built with Government funds or not. Some of these we believe are sufficiently interesting to be worth commenting upon here.

CLOTHES CLOSETS IN EVERY BEDROOM

For instance, the Administration has felt it important to require that in all types of houses—boarding houses, lodging houses and hotels, as well as in private dwellings—every bedroom shall have a clothes closet opening from the room. It has barred out the built-in wardrobe dresser and it has even gone so far as to suggest a minimum depth for clothes closets and require them to be supplied with rods so as to take coat hangers. It also requires every closet to have a door. To many this may seem like going into matters of detail of comparatively minor importance, but it is just such details as these which make or break enterprises of this kind. In some parts of the country, partly for economy's sake, but also through a mistaken idea that the clothes of workers need special fumigation and airing, closet doors are omitted. This is a source of great discomfort and inconvenience to the tenants. A working-

man's wife is no different from anybody else's wife. She dislikes just as much as does any other woman having dust or dampness pour in on her clothes. Similarly, so simple a thing as the requirement for providing rods in each closet to take coat hangers has an importance way out of proportion to its cost. In the first place, it more than doubles the capacity of the closet. There are probably not five industrial housing developments in the country where such rods are provided and in many the clothes closets are built so narrow that even if a rod were provided a clothes hanger couldn't be used on it. For this reason the Administration has felt it necessary to impose a minimum depth of 22 inches in all closets.

ARRANGEMENT OF HALLS, STAIRS AND DOORS

One of the things that will not be found so stated in the Standards, but which has had very careful consideration, is the arrangement of halls, stairs and door openings so that heavy pieces of furniture such as are common to workingmen's families, may be taken up and down stairs and inside of rooms without having to take the house apart as is sometimes the case in workingmen's dwellings of the commercial type. It ought not to be necessary in such houses to take the piano or the brass bed, like a safe, up through the outside windows, but it frequently happens. Moreover, the houses built with Government money will be such that the decencies of life and death can be observed and a coffin can be taken down stairs without standing it on end. If any one thinks that this is not an important matter he has little knowledge of the feelings which control the workingman. He resents such an indignity to the remains of some one dear to him just as much as would any of us. And so the Government requires that "halls, stairs and doors shall permit the easy moving of furniture."

In very recent years a few architects, especially those who have had their training in Paris, have adopted the practice of planning the furniture in the rooms. It is a most important practice. In the average workingman's dwelling it is honored more in the breach than in the observance. It too frequently happens that when the workingman puts his furniture in his nice little house, he finds no place for his beautiful brass double bed, which is the chief article of furniture in the average mechanic's home and is to be

found quite as often in the home of the foreign laborer as it is in the home of the American mechanic.

Consequently, windows that have been provided to furnish light and ventilation are practically useless, for the bed is jammed up against them and the window as a result is never or seldom opened and the shade is kept pulled down, thus defeating the architect's purpose. Similarly, closet and room doors are often so placed as to get in the way of nearly all of the furniture. In the new Standards these difficulties have been anticipated and it is required that beds shall be indicated on plans, to scale, and it is pointed out to the architects, some of whom seem to be without that domestic knowledge that double beds are 5 feet in width by 6 feet 6 inches in length and single beds three feet wide. It might at first blush seem to the ordinary observer that it was hardly necessary to go into so much detail on this matter, but the Administration has already received plans from responsible architects of good standing where every double bed was too narrow and was really a three-quarter bed—something that is seldom found in workingmen's homes—with a result that the bed when shown on the plans in the proper size did get in the way of doors and windows.

The Standards also add this important provision: "It is recommended that beds be free-standing and not located in a corner or with the side against a wall." Here again a necessary warning has been served upon the architectural profession. The writer recently saw a very attractive and charming industrial housing development, one of the best in the country, where the architect had prided himself upon his forethought and intelligence in planning in all of the beds in the bedrooms, but he was either a bachelor or had never had the experience of helping his wife make the bed. The result was that all of his beds were shown jammed up in a corner with one side against the wall. He was greatly surprised to learn that the housewife didn't like beds located in that manner; that it was impossible to make a double bed thus situated without pulling out the bed and pushing it back again, and that this was a nuisance. In addition, from the point of view of health, it is highly desirable that people should not be asked to sleep with their noses up against the wall. These defects, so frequently encountered in the work-

A MODEL HOUSING LAW

ingman's dwelling, have been anticipated in the new Standards and it is hoped will be obviated.

ARRANGEMENT OF SINKS AND WASHTUBS

A similar consideration of the convenience and comfort of the housewife is found in the requirement that sinks and washtubs shall have the rim 36 inches above the floor. This will prevent many an aching back.

OUTWARD APPEARANCE

Coming to the question of outside appearance, we find that board fences are barred out and hedges or open metal fences encouraged. Provision for drying clothes is to be made and it is suggested that where metal fences are used the fence standards can be advantageously designed for this purpose. The backyard vegetable garden is not to be so much considered as to make the dividing up of the property into deep lots a desideratum to be sought after. It is suggested instead that the European practice of centrally located and conveniently accessible allotment gardens be followed rather than attempting in new developments to provide deep lots for the purpose of giving each man his own garden at the back of his house. Porches are stated to be desirable, but must be built of durable construction with proper foundations and must not encroach on the side yard or unduly darken rooms.

When it comes to the question of materials of exterior walls, the Standards very properly state that this question is dependent upon local supplies. Brick, terra cotta, stone or concrete are preferred for all outer walls. In the case of buildings housing a number of people, such as lodging houses and hotels for men and women, outer walls of frame, except in the case of one-story buildings, are absolutely prohibited and frame tenements are similarly prohibited. Wood frame, either clapboard, shingled or stuccoed, is permitted for detached or semi-detached single-family and two-family houses not over two and one-half stories high. Division walls between houses built in rows or groups are required to be of brick, terra cotta, stone or concrete.

STANDARDS OF THE FEDERAL GOVERNMENT

ELIMINATION OF WINDING STAIRS

One of the questions which will make many architects put more study upon the plan of a workingman's dwelling than they have ever put before is the elimination of winding stairs. These are absolutely barred out for all classes of buildings; for, it has been found in practice that by a little bit more careful study the winder can be avoided, and it is the general experience among those familiar with dwellings of this kind that such stairs are very objectionable, that not only children fall down them and get injured, but that adults find great difficulty in getting accustomed to them and frequent accidents result. A maximum height of 8 inches for risers and a minimum width of 9 inches for treads is required.

VENTILATION

When it comes to questions of ventilation and light and air, there is nothing very startling or new in the Standards adopted. Obviously the Federal Government could not bring itself to loan money upon houses containing dark rooms, or even on houses with rooms inadequately lighted or ventilated. The Standards require that every room in every type of building shall have at least one window of not less than 10 square feet in area opening directly to the outer air. In tenement houses and in lodging houses and hotels 12 square feet is the minimum required. This doesn't mean that *every* window must be 12 square feet in area, for there has been no thought of putting such a straitjacket upon architectural design. All that is required is that there shall be in every room at least one window containing this minimum area. The greatest latitude is given architects in utilizing windows as an essential part of the design of the house, and casement, pivoted and double-hung sash are all permitted and encouraged. While one window is required in every room, it is stated that two windows in each room are generally preferred; though it is recognized that in the small bedrooms one window is sufficient. Special emphasis is placed upon the desirability of cross-ventilation to secure moving air, and it is pointed out that this should be as direct as possible and it is suggested that where practicable communicating doors be provided between bedrooms

A MODEL HOUSING LAW

for this purpose; that where this is not possible transoms be provided, and doors and windows be so located as to make cross-ventilation as nearly direct as possible.

PLUMBING

The best practice in plumbing requirements is followed. The house drain under the house and 5 feet outside of it is required to be of extra heavy cast iron. Soil and waste lines similarly are recommended to be either extra heavy cast iron or genuine wrought iron and are required to be extended through the roof. One departure from the usual plumbing practice, and one which will appeal to architects as an economy and as a practical measure, is the permission to use a 3-inch soil stack where not more than two waterclosets are placed on one stack. Antiquated types of fixtures are naturally barred out. Plunger, pan, long-hopper and range closets are prohibited; and waterclosets are required to be of porcelain and either wash-down, syphon or syphon-jet type, in all cases with an individual flush tank. The new type of open-front seat so important in preventing venereal disease is recommended. Outdoor waterclosets are absolutely prohibited, as are privies; cellar waterclosets are to be permitted only where they are supplementary to the accommodations required under the Standards, and even then must be constructed under conditions which will not give rise to abuse. One very important requirement is that access shall be had to all watercloset compartments either from a hall or vestibule and never solely from a room. This is essential for privacy. Wooden sinks and wooden washtrays are barred out. Hot and cold water supply is to be provided for all fixtures. Exposed pipes are preferred, though not always required, and when exposed preference is expressed for the use of wrought iron. Special emphasis is laid upon the desirability of concentrating pipes where possible, and especially in Northern climates, in keeping them away from outside walls so as to avoid freezing.

HEIGHT OF BUILDINGS

Single-family houses are to be kept down to two and one-half stories in height and two-family houses are limited to two stories. All other types of buildings—namely, tenement houses and hotels

and lodging houses—are limited to four stories. While cellars are not required in all cases, nor are they to be deemed essential under the whole house in the case of private dwellings and two-family houses, a minimum height of 6 feet 6 inches is required and all cellars must be well lighted with good cross-ventilation and dry and well paved. Where cellars are omitted the house has to be set up on posts, stones or a wall, at least 2 feet above the ground, and this space is required to be drained, enclosed and ventilated.

ROOMS

An attempt is made to guide the architectural profession as to what is the best practice and the desires of the working population with regard to room accommodation. In workingmen's dwellings that have been commercially built in this country a mistake has often been made in the past in providing too many rooms, the six-room and seven-room house predominating to a very large extent. The average workingman does not want so many rooms. With a normal family he cannot use so many rooms and the result is that he is often induced to take in roomers or lodgers; the temptation to use the extra rooms in this way being almost irresistible. Moreover, the average mechanic does not wish to spend the money necessary to furnish so many rooms, nor can he afford to heat them, nor does his wife wish to take care of so many rooms. In the case of "common labor," as a rule the workingman cannot afford to pay for more than four rooms, though he generally is forced in most parts of the country to rent a house containing either five, six or seven rooms.

With full recognition of these facts the Housing Administration has suggested in the case of the single-family and two-family houses that the best type of house for the higher paid worker is a five-room type consisting of parlor, large kitchen, three bedrooms and bathroom. As an alternative type of house it is suggested that in place of a large kitchen a dining room and kitchenette may be provided. Architects are cautioned against providing many houses of the four-room type for the higher paid workers. In some cases where there are small families these will be desired, but as a rule the higher paid worker should have at least five rooms. A similar caution is urged with regard to the six-room type of house

consisting of parlor, dining room, kitchen and three bedrooms and bath. The Administration states that such a type is suited only for abnormally large families and should be provided sparingly. It adds that for the lower paid workers the four-room type of house is the desirable type and that it should consist of a parlor, a kitchen, two bedrooms, and a bathroom. An interesting provision is found in the requirement that where a house has more than seven rooms it is to be treated as Type 3, viz., a single-family house with rooms for lodgers or boarders. This means that the additional bedrooms must be so arranged and located as to insure privacy of access for boarders, and privacy of toilet accommodations. In such houses it is required that lodgers shall have access to their bedrooms and to a separate watercloset compartment without having to pass through the rooms designed for the use of the family. This will do away with very serious evils that now exist in connection with the practice of taking roomers in workingmen's dwellings.

SIZE OF ROOMS

In many workingmen's houses that have been built in the past the rooms are frequently too small. In order to bring about economy of construction, and also sometimes because of disadvantageous lot units, and in the case of the speculative builder a desire to "skin the job" as much as possible, has led to the construction of houses with rooms of inadequate size. The Housing Administration, in order to prevent this kind of evil in Government construction, imposes a minimum size for bedrooms in private dwellings, two-family houses and tenement houses, of 80 square feet, with a minimum width of 7 feet. In lodging houses and hotels it permits individual bedrooms as narrow as 6 feet in width and as small as 60 square feet in area, though it recommends in such types of buildings bedrooms of 70 square feet in area with a 7-foot width as a minimum. In all family dwellings, whether private house, two-family house or the tenement, one large bedroom is required to be provided of a size not less than 10 by 12 feet and preferably not larger than 12 by 14 feet.

Some architects in their desire to give ample space, sometimes provide rooms that are too large. In order to avoid this certain maximum sizes are indicated. This is quite important; for, the

bedroom that is too large encourages the taking in of roomers and lodgers and is used practically as a dormitory. The house that has too large rooms is also unattractive to the workingman, who finds it difficult and expensive to heat, and he also finds that the ordinary furniture, such as he can buy in the department store or such as he possesses, will not fit it. This is an important consideration to the workingman; in fact, a room that will nicely take a 9 by 12 rug will be found to be the size room that the workingman will generally desire. For these reasons the Administration has suggested a maximum size for all of the large rooms—namely, parlor, dining room, kitchen and large bedroom—of 12 by 14 feet, with a minimum size for these rooms of 10 by 12 feet. Kitchenettes are permitted only where there is a separate dining room. In such case the kitchenette may be as small as 6 feet in width with a minimum area of 70 square feet.

HEIGHT OF ROOMS

In private dwellings and two-family houses as well as in lodging houses and hotels, rooms 8 feet high are permitted. In the latter class of buildings the public rooms are required to be from 9 to 12 feet in height. In tenement houses, following the practice in most cities and the standards of most tenement house laws, a clear height of 9 feet is required for all rooms. Attic rooms are encouraged in order to make possible the greater use of houses with pitched and gambrel roofs; but an attempt is made, however, to prevent such rooms from becoming either unsanitary or uncomfortable because of lack of proper ventilation, or of inadequate height, or too great heat in summer.

In all cases a roof air space of at least 8 inches is required between the top of the ceiling and the under side of the roof; this space to be provided with adequate waterproof openings for ventilation at both ends, if practicable. In addition, where there are attic rooms it is required that there shall be a height of 8 feet throughout a floor area of at least 40 square feet; that there shall also be a clear height of not less than 6 feet over an area of at least 80 square feet, with a minimum width of 7 feet throughout that area. The practice of filling up the attic in a private dwelling with roomers is discouraged by the requirement that in two and one-half story houses a single bedroom only may be provided in the attic.

A MODEL HOUSING LAW

FIRE PROTECTION

Every building over three stories high must be a fireproof building throughout. In hotels and lodging houses for both men and women the buildings are required to be divided up at intervals of approximately 3,000 square feet by fire walls of brick, terra cotta, stone or concrete, with fireproof self-closing doors at all openings. In hotels and lodging houses the stairs and stair halls are required to be fireproof and enclosed in walls of brick, terra cotta, stone or concrete with fireproof self-closing doors at all openings. Dumb-waiters and elevators are not permitted in stair inclosures, but are required to be inclosed in separate fireproof shafts with fireproof doors, those for dumb-waiters to be self-closing. In these types of houses inside cellar stairs are permitted, but are required to be inclosed similarly with fireproof walls with self-closing fireproof doors.

MEANS OF EGRESS

In hotels and lodging houses for both men and women additional means of egress to the street or yard must be provided either by an additional flight of stairs, by a fire tower or by a stair fire-escape. The fire-escape is considered the least desirable method. Such additional means of egress are required to be remote from the main stairs and to be separated from it and from the other parts of the building by fireproof walls, with fireproof self-closing doors at all openings, and to be so located that no room shall be more than 40 feet away from a means of egress. Similar provisions are made with regard to tenement houses except that, of course, in this class of building the egress is required to be direct from each apartment or flat instead of from a public hall.

SOME UNIQUE FEATURES

Hotels and lodging houses for both men and women, especially for women, present some novel features which the writer believes will become the accepted type for buildings of this kind. The type of building itself, a city hotel for working men and working women, is a new type and there has been comparatively little experience on which to base conclusions. What experience there has been, however, has been freely availed of. Some of the inter-

esting features of the women's lodging house and hotel which may be cited are the following:

First, the suggestion that a girl's lodging house or hotel should provide accommodations for not less than 75 girls; that it is uneconomic to house less, and that similarly it should not contain more than 150 girls, as it has been found with more than that number the difficulties in management and supervision are too great. The same considerations do not apply in the case of men.

The providing of so-called "beau parlors" in the women's lodging houses or hotels where the girls can receive their men callers under proper conditions and yet be under the observance at least of the matron, without embarrassing the girl, is one of the interesting and admirable features that have been worked out.

In addition, the arrangement is suggested that on the first floor of such buildings there shall be provided a matron's office so placed as to oversee the single entrance and the access to the sleeping quarters. A kitchenette, a sitting room and a sewing room are to be provided on at least alternate room floors so as to give the girls a chance to make candy and to cook up such midnight messes as are dear to the heart of youth. The opportunity also to sit and do their mending without having to go down stairs is an important one. Similarly, provision is made for a room, preferably in the basement, where the girls can wash their clothes.

The hotel type corresponds very closely to the lodging house type except that in addition it is required to have a dining room and cafeteria with the necessary pantry, service rooms and kitchen.

One interesting detail that differentiates the women's lodging house from the men's is the requirement that in the women's general lavatory on each floor there shall be partitions between washbasins extending up five feet from the floor so as to give privacy. This is not found necessary with the men. Similarly, with the men, showers are provided, but for the women these are required to be body showers.

The Standards contain so many interesting details that we print them in full.

A MODEL HOUSING LAW

DEPARTMENT OF LABOR, BUREAU OF INDUSTRIAL HOUSING AND
TRANSPORTATION

STANDARDS RECOMMENDED FOR PERMANENT INDUSTRIAL HOUSING DEVELOPMENTS

March, 1918

ACKNOWLEDGMENT

The following standards for permanent buildings to be constructed for the housing of industrial war workers were adopted by the Bureau of Industrial Housing and Transportation of the Department of Labor, in consultation with Mr. Lawrence Veiller, secretary National Housing Association, on March 7, 1918. The original draft was prepared by Mr. Veiller. It was discussed and modified in a series of conferences in the course of which the following persons took part and offered helpful suggestions:

Grosvenor Atterbury, architect, member of the Committee on War-time Housing of the National Housing Association.

Alexander Bing, secretary of the Housing Committee of the Emergency Fleet Corporation.

Charles B. Ball, chief sanitary inspector, Chicago.

Owen Brainard, architect and engineer.

Arthur C. Comey, landscape architect.

Francis Dykes, real estate department, Bethlehem Steel Co.

Otto M. Eidlitz, civil engineer and builder.

James Ford, professor of social ethics, Harvard University.

Philip Hiss, architect, chairman Section on Housing, Committee on Labor, Council of National Defense.

John Ihlder, housing investigator.

Harlean James, executive secretary Section on Housing, Committee on Labor, Council of National Defense.

Walter H. Kilham, architect.

Robert D. Kohn, architect, member of the Housing Committee of the Emergency Fleet Corporation.

Joseph D. Leland, 3d, architect.

STANDARDS OF THE FEDERAL GOVERNMENT

Perry R. MacNeille, consulting architect to the Emergency Fleet Corporation.

Horace B. Mann, architect.

Marcia Mead, architect.

John Nolen, landscape architect, member of the Committee on War-time Housing of the National Housing Association; member of the Housing Committee of the Emergency Fleet Corporation.

Frederick Law Olmsted, landscape architect, member of the Committee on Emergency Construction, Council of National Defense.

E. L. Palmer, jr., architect.

William C. Post, architect.

Lincoln Rogers, Bureau of Yards and Docks, United States Navy.

I. N. Phelps Stokes, architect.

Lawrence Veiller, secretary National Housing Association; member of the Committee on War-time Housing of the National Housing Association.

George S. Welsh, architect.

HOUSING STANDARDS FOR PERMANENT CONSTRUCTION

These standards are not intended as inflexible requirements, but any plans which fail to conform to them are not likely to be accepted unless supported by very strong reasons. Local building codes, housing laws, and similar ordinances are to be followed: *Provided, however,* That in case such local regulations permit or require anything not permitted by these standards the express approval of this bureau is to be obtained before departing from the standards as here outlined.

TYPES OF HOUSES

(Principal types only)

- Type 1. Single-family house.
- Type 2. Two-family house.
- Type 3. Single-family house with rooms for lodgers or boarders.
- Type 4. Lodging house for men.
- Type 5. Hotel for men.
- Type 6. Lodging house for women.
- Type 7. Hotel for women.
- Type 8. Tenement house.
- Type 9. Boarding house.

I. GENERAL PROVISIONS

All types of houses to conform to these general provisions and, in addition, to certain special provisions as later indicated.

1. ARRANGEMENT.—Row or group houses normally not to be more than two rooms deep.
2. BASEMENTS.—No living quarters to be in basements.
3. CLOSETS.—Every bedroom to have a clothes closet, opening from the room. Built-in wardrobe dressers will not be accepted. Normally such closet to be not less than 22 inches deep and with door. Closets to be supplied with rods to take coat hangers.
4. COOKING.—Gas preferred, but flue for coal stove to be

STANDARDS OF THE FEDERAL GOVERNMENT

provided; all flues to be lined. The question of whether or not cook-stoves are to be provided with the house to be considered at the time materials are being ordered.

5. FENCES.—Board fences will not be accepted. Hedges or open metal fences desirable. Suitable arrangements for drying clothes to be provided. Where there are open metal fences the fence standards can be designed for this purpose.

6. FURNITURE SPACE.—Beds to be indicated to scale on plans (double beds, 5 feet by 6 feet 6 inches; single beds, 3 feet by 6 feet 6 inches). Location of beds not to interfere with windows or doors. It is recommended that beds be free standing and not located in a corner or with the side against a wall. Space to be provided for two pieces of furniture in addition to bed. Halls, stairs, and doors to permit easy moving of furniture.

7. GARDENS.—Allotment gardens, conveniently accessible, preferable to increasing the size of the lot to provide for individual backyard vegetable gardens.

8. LIGHTING.—Electricity preferred.

9. MATERIALS OF EXTERIOR.—Materials dependent on local supplies; brick, terra cotta, stone, or concrete preferred. Outer walls to be insulated against dampness and condensation. Rat nogging to be provided. Roof to be fire resisting; leaders and gutters not essential unless drip will do harm.

10. OPEN SPACES.—Side-yard space between adjacent buildings to be preferably 20 feet; minimum, 16 feet; such space to be increased proportionately for each additional story, or part of story, above two stories. If this space is not obtainable because of lot sizes or land values, houses should be built in rows or groups.

Rear-yard depth not to be less than height of building, nor in any case less than 20 feet. Minimum distance between backs of houses to be 50 feet. Consideration to be given as to whether sites should be provided for garages. When not an integral part of the house, garages should preferably be at the rear of the lot, should not be located closer than 15 feet to the nearest part of house, and should not exceed one story in height.

Front yards or set-backs desirable where practicable; minimum distance from front of house to front of opposite house to be 50 feet.

Covered porches to be considered part of building.

11. PLUMBING.—House drain under house and 5 feet outside to be extra heavy cast iron. Vitrified clay pipe, with proper joints, may be used where ordinance permits. It is recommended that soil and waste pipes be extra heavy cast iron or genuine wrought iron. Soil and waste pipes to be extended through roof. A 3-inch soil stack preferred where not more than two water-closets are placed on one stack.

Water-closets to be porcelain and wash-down, siphon, or siphon-jet type, with individual flush tank. Open-front seat recommended. Outdoor water-closets will not be accepted. Privies will not be accepted. Cellar water-closets not permitted except where supplementary to accommodations herein required.

Access to water-closet compartments to be from hall or vestibule, never solely from a room. Plunger, pan, long-hopper, and range closets will not be accepted.

Hot and cold water to be provided to all fixtures, with proper drains and shut-offs. Wooden sinks and wash trays will not be accepted.

All fixtures to be separately trapped except in batteries of wash trays and combined sink and wash tray, where one trap is sufficient.

Venting of traps to conform to approved practice, except that the back venting of the top or only fixture on a line is not required. Sink and lavatory traps to be connected direct to the vertical wastes, and not to floor branches. Exposed pipes preferred, and, when exposed, wrought iron preferred. Where possible, lines to be concentrated and kept from outside walls.

12. PORCHES.—Desirable. To be of durable construction, particularly the foundations; to be restricted from encroaching on minimum side yard or unduly darkening rooms.

13. REAR ENTRANCES.—In the case of row or group houses there may be access to the rear through minor one-way public streets. Such streets to be not less than 12 feet wide; to be properly paved, curbed, drained, and lighted. Private alleys will not be accepted.

14. ROOF AIR SPACE.—In every house there shall be a minimum clear space of 8 inches between the ceiling and the roof; this

STANDARDS OF THE FEDERAL GOVERNMENT

space to be provided with adequate waterproof openings for ventilation, at both ends if practicable.

15. ROOMS, NUMBER OF.—Bathrooms are not to be counted as rooms.

16. STAIRS.—Risers to be not more than 8 inches high and treads to be not less than 9 inches wide. Winding stairs will not be accepted except in types 1, 2, and 3. Not more than 2 winders will be allowed in series. Treads must measure at least 9 inches wide 18 inches from rail.

17. VENTILATION.—Every room to have at least one window opening directly to the outer air. Two windows in each room generally preferred; one window sufficient in small bedrooms. Each room to have a window area of not less than 12 square feet.

Cross ventilation as direct as possible to be provided for all rooms through windows, transoms, or doors; communicating door recommended between front and rear bedrooms in row houses.

Every bathroom to have window of not less than 6 square feet in area opening directly to the outer air.

Every water-closet compartment to have a window of not less than $4\frac{1}{2}$ square feet in area opening directly to the outer air. A skylight in the roof, with an equal amount of glass area and provided with adequate ventilators, will be accepted in lieu of such window, but skylights are not desirable.

18. WINDOWS.—Minimum area to be measured between stop beads. Window head to be as near ceiling as practicable. Windows may be double-hung, pivoted, or casement. If double-hung, upper and lower sash to be the same size. In cities with soft-coal smoke nuisance, minimum area to be increased.

Window frames to be designed to accommodate screens and outside shutters. In cold climates, weather strips are recommended.

II. SPECIAL PROVISIONS FOR TYPES 1, 2, AND 3

In addition to complying with all general provisions, types 1, 2, and 3 are to comply with the following special provisions.

Type 1. Single-family house.

Type 2. Two-family house. ("Two-flatter," one family upstairs, one down. For "double house," see "single-family house, semidetached.")

A MODEL HOUSING LAW

Type 3. Single-family house with rooms for not more than three lodgers or boarders.

1. ARRANGEMENT.—Types 1 and 3 not to be over $2\frac{1}{2}$ stories high. Type 2 not to be over 2 stories high.

When detached or semidetached, types 1, 2, and 3 normally not to be over 3 rooms deep; when in rows or groups, not to be over 2 rooms deep except that the end house of row may be 3 rooms deep.

2. CELLAR.—To be well lighted; cross ventilated, dry, and paved or cemented. Minimum clear height under joists, 6 feet 6 inches. When hot-air furnaces are used, minimum height 7 feet. Cellar not essential under whole house. Where climatic or soil conditions make cellar inadvisable it may be omitted, in which case adequate provision is to be made for storing fuel. Where cellar is omitted, house to be set up on masonry piers or walls 2 feet clear from ground; space to be drained, inclosed, and ventilated.

3. GROUPING.—Single-family houses of the more expensive type preferably to be detached houses, but may be semidetached or even attached in rows or groups. In other cases where land values permit, detached or semidetached are desirable; otherwise attached in rows or groups.

4. HEATING.—Provision to be made for heating houses. If not otherwise heated, bathroom to be heated from kitchen stove.

5. MATERIALS OF EXTERIOR.—Brick, terra cotta, stone, or concrete preferred; but wood frame clapboarded, shingled, or stuccoed permitted for detached or semidetached houses not over $2\frac{1}{2}$ stories high. Party walls to be of brick, terra cotta, stone, or concrete.

6. PLUMBING.—Bathtub (shower is not sufficient).

Lavatory, to be preferably in bathroom.

Sink to be in kitchen; rim 36 inches above floor.

Washtubs with covers, preferably two, rim 36 inches above floor, to be set in kitchen or in well-lighted, dry, and ventilated cellar.

Water-closet to be inside the house in well-lighted and ventilated compartment, with window of $4\frac{1}{2}$ square feet minimum area to outer air, and preferably with impervious floor not of concrete.

7. ROOMS, HEIGHT OF.—Minimum, 8 feet.

STANDARDS OF THE FEDERAL GOVERNMENT

Sloping ceilings and "knee walls" will be accepted only under the following conditions: Roof space above flat portion of ceiling to be of ample size and adequately ventilated; spaces between rafters of sloping portion to be adequately ventilated into roof space; bedroom to have greater window area and better cross ventilation than the minimum permissible for a standard flat-ceiling room; bedroom to have a minimum height of 8 feet over an area of at least 40 square feet with a minimum flat-ceiling width of $3\frac{1}{2}$ feet, and a clear height of not less than 6 feet over an area of at least 80 square feet with a minimum width of 7 feet.

8. ROOMS IN ATTIC.—As a rule, in $2\frac{1}{2}$ -story houses, only one bedroom to be provided in the attic.

9. ROOMS, NUMBER AND USE OF.—In types 1 and 2: For higher-paid workers, five-room type preferred, with parlor, large kitchen, 3 bedrooms, and bathroom. Dining room and kitchenette may be provided in place of the large kitchen. Four-room type to be provided sparingly for higher-paid workers. Six-room type, with 4 bedrooms, or 3 bedrooms and parlor convertible into fourth bedroom, suited for abnormally large families only, and should be provided sparingly. Six-room type should normally have parlor, dining room, kitchen, 3 bedrooms, and bathroom.

For lower-paid workers, four-room type desirable, with parlor, kitchen, 2 bedrooms, and bathroom.

Any house having more than seven rooms to be treated as type 3.

In type 3, in addition to family quarters indicated above, single rooms for lodgers to be provided. In addition to the family water-closet accommodations, a water-closet compartment containing lavatory to be provided for the sole use of the lodgers. Lodgers to have access to their bedrooms and to their water-closet compartment without going through rooms designed for use of family.

10. ROOMS, SIZE OF.—One large bedroom to be provided, size 10 by 12 to 12 by 14 feet.

Small bedrooms, minimum area, 80 square feet; minimum, width, 7 feet.

Parlor, 10 by 12 to 12 by 14 feet.

Dining room, 9 by 12 to 12 by 14 feet.

Kitchen (where there is no separate dining room), 10 by 12 to 12 by 14 feet.

Kitchenette (only where there is a separate dining room), minimum width, 6 feet; minimum area, 70 square feet.

III. SPECIAL PROVISIONS FOR TYPES 4 AND 5

In addition to complying with all general provisions, types 4 and 5 must comply with the following special provisions.

Type 4. Lodging house for men.

Type 5. Hotel for men.

1. ARRANGEMENT.—Provision to be made for 75 men or more. Height limited to 4 stories, except in large cities.

2. CELLAR.—Minimum height, 7 feet; to be well lighted, cross ventilated, dry, and paved or cemented. Cellar not essential under whole building. Where omitted, building to be set up on masonry piers or walls 2 feet clear from ground; space to be drained, inclosed, and ventilated.

3. FIRE PROTECTION.—If over 4 stories high, to be fireproof throughout. If over 3 stories high, first-floor construction to be fireproof.

If over 2 stories high, a nonfireproof building the area of which exceeds approximately 3,000 square feet to be divided by fire walls of brick, terra cotta, stone, or concrete into areas not exceeding approximately 3,000 square feet each. All openings in such walls to be provided with fireproof self-closing doors.

Adequate means of egress to be provided to street or yard by an additional flight of stairs, or by fire tower or stair fire escape (fire escape less desirable). All such additional means of egress to be remote from the main stairs and separated therefrom and from the other parts of the building by walls of brick, terra cotta, stone, or concrete, with fireproof self-closing doors at all openings. Such additional means of egress to be so located that no room shall be more than 40 feet from a means of egress. All main egress doors to swing out.

All stairs and stair halls to be not less than 3 feet wide in the clear and to be inclosed in walls of brick, terra cotta, stone, or concrete, with fireproof self-closing doors at all openings. All doors to stair halls to swing into stair hall without obstructing free passage.

STANDARDS OF THE FEDERAL GOVERNMENT

Dumb-waiters and elevators will not be accepted in stair inclosure; they should be inclosed in fireproof shafts with fireproof doors, those for dumb-waiters to be self-closing. Inside cellar stairs to be inclosed with walls of brick, terra cotta, stone, or concrete, with self-closing fireproof doors. Standpipes with hose reels on each floor to be so located that any point can be reached with 75 feet of hose.

4. HEATING.—Except where connected with a central plant, provision to be made for independent heating.

5. MATERIALS OF EXTERIOR.—To be brick, terra cotta, stone, or concrete, except that wood frame will be accepted for one-story buildings.

6. PLUMBING.—Minimum provision: One water-closet per 12 men; one urinal per 16 men; one lavatory per 8 men; one shower per 10 men; one bathtub per floor, provided there is not less than one per 50 men. Ratio to be increased where there are less than 50 men per floor. Floor and base of toilet rooms to be waterproof not of concrete. Sufficient water-closets to be provided in the cellar or basement for the accommodation of engineers, firemen, and laundry workers.

7. ROOMS, HEIGHT OF.—Height for public rooms, 9 to 12 feet; minimum for bedrooms, 8 feet.

8. ROOMS, NUMBER AND USE OF.—Each lodger to have separate room. Two-men rooms not permitted. (Cubicles and dwarf partitions will not be accepted.)

Each floor to have a general bathroom containing required showers, tub, and lavatories. Each floor also to have a general toilet room containing required water-closets and urinals. Each of the two rooms to have windows opening directly to the outer air, and to be separate but adjoining and communicating. Service closets with slop sinks and space for brooms and pails to be provided on each floor.

Smoking room, reading room, billiard room, physician's room, laundry for washing clothes, superintendent's office and adequate quarters for superintendent to be provided. Unless provided elsewhere in the community, bowling alleys to be in basement.

Hotel (type 5) also to have dining room and cafeteria with

outside access thereto, and with pantry, service rooms, kitchen, and toilet facilities for men and women employees. An additional general toilet room is to be provided conveniently accessible.

9. ROOMS, SIZE OF.—Single bedrooms to have a minimum area of 70 square feet and minimum width of 7 feet.

10. VENTILATION.—Bedroom doors preferably to be placed opposite each other and to have transoms or slat panels.

11. WINDOWS.—One window in each room to have minimum area of 12 square feet between stop beads.

IV. SPECIAL PROVISIONS FOR TYPES 6 AND 7

In addition to complying with all general provisions, types 6 and 7 must comply with the following special provisions.

Type 6. Lodging house for women.

Type 7. Hotel for women.

1. ARRANGEMENT.—Provision to be made for 75 to 150 women (with less than 75 the unit is not economical; with more than 150 there are difficulties in management and supervision).

Height limited to 4 stories, except in large cities.

2. CELLAR.—Minimum height, 7 feet; to be well lighted, cross ventilated, dry, and paved or cemented. Cellar not essential under whole building. Where omitted, building to be set up on masonry piers or walls 2 feet clear from ground; space to be drained, inclosed, and ventilated.

3. FIRE PROTECTION.—If over 4 stories high, to be fireproof throughout. If over 3 stories high, first-floor construction to be fireproof.

If over 2 stories high, a nonfireproof building the area of which exceeds approximately 3,000 square feet to be divided by fire walls of brick, terra cotta, stone, or concrete into areas not exceeding approximately 3,000 square feet. All openings in such walls to be provided with fireproof self-closing doors. Adequate means of egress to be provided to street or yard by an additional flight of stairs, or by fire tower or stair fire escape (fire escape less desirable). All such additional means of egress to be remote from the main stairs and separated therefrom and from other parts of the building by walls of brick, terra cotta, stone, or concrete, with fireproof self-closing doors at all openings. Such additional means of egress to

be so located that no room shall be more than 40 feet from a means of egress. All main egress doors to swing out.

All stairs and stair halls to be not less than 3 feet wide in the clear and to be inclosed in walls of brick, terra cotta, stone, or concrete, with fireproof self-closing doors at all openings. All doors to stair halls to swing into stair hall without obstructing free passage.

Dumb-waiters and elevators will not be accepted in stair inclosure; they should be inclosed in fireproof shafts with fireproof doors, those for dumb-waiters to be self-closing. Inside cellar stairs to be inclosed with walls of brick, terra cotta, stone, or concrete, with self-closing fireproof doors. Standpipes with hose reels on each floor to be so located that any point can be reached with 75 feet of hose.

4. HEATING.—Except where connected with a central heating plant, provision to be made for independent heating.

5. MATERIALS FOR EXTERIOR.—To be of brick, terra cotta, stone, or concrete, except that wood frame will be accepted for one-story buildings.

6. PLUMBING.—Minimum provision: One water-closet per 10 women, one lavatory per 6 women, one body shower per 10 women, one bathtub per 25 women. Ratio to be increased where there are less than 50 women per floor. Floor and base of toilet rooms waterproof, not of concrete. Dwarf partitions between lavatories to extend at least 6 feet above the floor and have curtains. Sufficient water-closets to be provided in the cellar or basement for the accommodation of engineers, firemen, and laundry workers.

7. ROOMS, HEIGHT OF.—Height for public rooms, 9 to 12 feet; minimum for bedrooms, 8 feet.

8. ROOMS, NUMBER AND USE OF.—Each lodger to have separate room. (Cubicles and dwarf partitions will not be accepted.) Rooms for two women not permitted. Each floor to have a general bathroom containing required body showers, tub, and lavatories. Each floor also to have a general toilet room containing required water-closets. Each of these two rooms to have windows opening directly to the outer air, and to be separate, but adjoining and communicating. Service closet, with slop sink and space for brooms and pails to be provided on each floor.

First floor to have matron's office so placed as to oversee the

A MODEL HOUSING LAW

single entrance and access to sleeping quarters; to have reception parlors or alcoves (one for every 20 women), or large parlor with furniture arranged for privacy in conversation; also assembly hall with movable partitions and set stage.

Kitchenette, sitting room, and sewing room to be provided on at least alternate room floors. Matron's quarters, physician's room, and infirmary, laundry in which lodgers can wash their clothes, and trunk room to be provided.

Hotel (type 7) also to have dining room and cafeteria, with outside access thereto, with pantry, service rooms, kitchen, and toilet facilities for employees. An additional toilet room is to be provided conveniently accessible.

9. ROOMS, SIZE OF.—Single bedrooms to have a minimum area of 70 square feet and minimum width of 7 feet.

10. VENTILATION.—Bedroom doors preferably to be placed opposite each other, and to have transoms or slat panels.

11. WINDOWS.—One window in each room to have minimum area of 12 square feet between stop-beads.

V. SPECIAL PROVISIONS FOR TYPE 8

Type 8. Tenement house (including flats or apartments), a building occupied in whole or in part by three or more families.

Tenement and apartment houses are considered generally undesirable and will be accepted only in cities where, because of high land values, it is clearly demonstrated that single and two-family houses can not be economically provided, or where there is insistent local demand for this type of multiple housing. In any case, they will be accepted only where the Bureau of Industrial Housing and Transportation is convinced that local conditions require or justify their use. They must conform in general to local building ordinances, to the general provisions of these standards, and to other special provisions to be issued by the Bureau of Industrial Housing and Transportation.

VI. SPECIAL PROVISIONS FOR TYPE 9

In addition to complying with all general provisions, buildings of type 9 must comply with the following special provisions.

Type 9. Boarding house. Where more than 3 and less than 25 rooms for lodgers are provided, building to be classed as board-

STANDARDS OF THE FEDERAL GOVERNMENT

ing house. If 3 lodgers or less, building to be classed as type 3; if 25 or more, to be classed as type 4, 5, 6, or 7.

1. ACCESS.—Lodgers to have access to their bedrooms and to their water-closet compartments and bathrooms without going through rooms designed for use of family. Separate outside entrance for lodgers recommended.

2. ARRANGEMENT.—Not to be over 3 stories high. Not to be over 2 rooms deep, except that the end house of rows may be 3 rooms deep.

3. CELLAR.—To be well lighted, cross ventilated, dry, and paved or cemented. Minimum clear height under joists, 7 feet. Cellar not essential under whole house; where omitted, house to be set up on masonry piers or walls 2 feet clear from ground; space to be drained, inclosed, and ventilated.

4. FIRE PROTECTION.—If frame, not to be over 2 stories high. If over 2 stories high, adequate means of egress to be provided to street or yard by an additional flight of stairs, or by fire tower or stair fire escape (fire escape least desirable). All such additional means of egress to be remote from the main stairs and separated therefrom and from the other parts of the building by walls of brick, terra cotta, stone, or concrete, with fireproof self-closing doors at all openings. Such additional means of egress to be so located that no room shall be more than 40 feet from a means of egress.

All stairs and stair halls to be not less than 3 feet wide in the clear and to be inclosed in walls of brick, terra cotta, stone, or concrete, with fireproof self-closing doors at all openings.

Dumb-waiters and elevators will not be accepted in stair inclosure; they should be inclosed in fireproof shafts with fireproof doors, those for dumb-waiters to be self-closing.

5. HEATING.—Except where connected with a central plant, provision to be made for independent heating.

6. MATERIALS OF WALLS.—Brick, terra cotta, stone, or concrete preferred, but wood frame clapboarded, shingled, or stuccoed permitted for detached or semidetached houses not over 2 stories high.

7. PLUMBING.—Family living quarters to have:
Bathtub (shower is not sufficient).

A MODEL HOUSING LAW

Lavatory, to be preferably in bathroom.

Sink to be in kitchen; rim 36 inches above floor.

Washtubs with covers, preferably two, rim 36 inches above floor, to be set in kitchen or in well-lighted, dry, and ventilated cellar.

Water-closet to be inside the house in well lighted and ventilated compartment, with window of $4\frac{1}{2}$ square feet minimum area to outer air, and preferably with impervious floor not of concrete.

In addition to above, a water-closet compartment containing lavatory to be provided for the sole use of the lodgers. Floor and base of toilet rooms to be waterproof, not of concrete.

The following minimum provisions to be made:

For men, 1 bathtub per 24 lodgers, 1 water-closet, and 1 lavatory per 8 lodgers, 1 shower per 10 lodgers; for women, 1 bathtub per 16 lodgers, 1 body shower per 10 lodgers, 1 lavatory per 5 lodgers, 1 water-closet per 8 lodgers. Dwarf partitions between lavatories for women to extend at least 6 feet above the floor and have curtains.

8. ROOMS, HEIGHT OF.—Minimum, 8 feet.

9. ROOMS IN ATTIC.—No lodgers' rooms in attic accepted.

10. ROOMS, NUMBER AND USE OF.—Each lodger to have separate room. Rooms for two lodgers not permitted. (Cubicles and dwarf partitions will not be accepted.) Building to contain more than 3 and less than 25 rooms for lodgers. In addition to living quarters for one family, lodgers' bathrooms and toilet rooms containing showers, tubs, lavatories, and water-closets to be provided; preferably, bathroom containing showers, tub, and lavatories to be separate but adjoining and communicating with water-closet compartment. One of each such rooms preferably on each floor. Each of these two rooms to have windows opening directly to the outer air. Lodgers to have a common room, also dining room; the latter to be located near family kitchen; the common room to be conveniently accessible from the outside.

11. ROOMS, SIZE OF.—Single bedrooms for lodgers to have a minimum area of 70 square feet and minimum width of 7 feet. Size of common room and dining room each to be proportionate to the number of boarders.

12. VENTILATION.—Bedroom doors preferably to be placed opposite each other and to have transoms or slat panels.

VIII
ZONING

VIII

ZONING

THE earlier edition of this book contained a section providing for the establishment of residence districts in a community by a simple method through which the majority of the property owners in the district affected, petitioned the local authorities for the establishment of such a district.

Since the first edition was published in 1914 much has happened in America in the progress of the movement for the Zoning or Districting of cities. Until a few years ago some lawyers believed that the courts would not sustain laws which imposed different requirements as to height and use of buildings and size of open spaces in different parts of the same city; for, this is in essence what Zoning does. With the decision of the United States Supreme Court in the famous *Hadacheck* case (239 U. S. 394) the whole question has been put on a different basis. There is now no shadow of doubt as to the legal validity of laws of this kind; for, the Court of last resort has affirmed in unmistakable terms the propriety of such legislation as a legitimate exercise of the police power of the State.

Since the enactment of the New York City Law in 1916, the states of California, Illinois, Iowa, New Jersey and New York have passed general laws permitting their cities to adopt Zoning schemes, and Oakland and Fresno in California, Philadelphia, Milwaukee, Newark, Jersey City, Rochester, N. Y., Niagara Falls, Detroit, Omaha, and St. Louis have appointed Commissions to work out such plans.

The following cities have either adopted Zoning Regulations or are at work upon them: Berkeley, Los Angeles, Milwaukee, Minneapolis, Newark, New York, Omaha, Ottawa, Philadelphia, Sacramento, St. Louis, and Washington, D. C.

It is thus seen that a number of cities and states have adopted

Zoning ordinances. Under these, the cities have been divided in some cases into very minute districts in which different regulations exist as to the heights of buildings and their use, viz., whether for residence purposes or factory purposes or for business purposes, etc.; in some cases also as to size of open spaces and percentage of lot that may be occupied.

Such ordinances when adopted have invariably been only as a result of careful and minute painstaking inquiry through a year or more by a local Commission which has gone into the question of local values with the very greatest care; for, naturally in setting boundaries of this kind and forbidding the use of property for certain purposes outside of such boundaries it is essential that the boundaries should be fixed only upon the most accurate knowledge of conditions and tendencies.

For these reasons with the general coming into vogue of Zoning laws, it has seemed better to omit from the text of the Model Housing Law in this edition the section for the establishment of residence districts.

It may be, however, that there are some communities which, though not yet ready for a complete Zoning law, would be greatly advantaged by the power to establish Residential Districts. For the benefit of these communities it has been thought wise to append to this chapter the provisions for the establishment of Residential Districts (Section 9, Model Law—1st edition). It is suggested that this be added to the Model Law as Section 11 and change the numbers of Section 11 and 12 to 12 and 13. It is as follows:

§ 11. RESIDENCE DISTRICTS.¹ Whenever the owners of record of two thirds or more of the linear frontage of one side² or street-frontage of any block shall by written petition to the common council duly signed and acknowledged, ask that such side or street-frontage of said block be designated as a "residence district," and the common council shall approve of such petition, such side or street-frontage of said block shall thereupon become a "residence district," and shall continue to be such until such time as a like petition asking that such side or street-frontage of said block cease to be a "residence district" shall be pre-

ZONING

sented to the common council and be approved by them. Except as otherwise provided in section thirty, no building other than a private-dwelling or two-family dwelling³ shall hereafter be erected or altered or converted to be so occupied on any lot abutting on such street-frontage so long as it continues to be a "residence district." Such written consents shall be filed in the health department and shall be public records. A "block" for the purposes of this section is a property division containing one or many lots and bounded by three or more streets.⁵

NOTE 1: This is somewhat novel in American practice. It is an attempt to protect residence districts from the invasion of commercial and other non-residence uses. The novel feature is that it is done by statute rather than by covenant. It is an attempt, therefore, to apply to America the European practice of establishing by regulation various districts or zones for different purposes, which is so vital a feature of most intelligent schemes of city planning. The plan which has been developed is believed to be especially applicable to American conditions. Its chief points are:

Explan-
ation

1. The request for restriction of use arises with the owners of the major part (two-thirds) of the property affected by the restriction.

2. It provides for a hearing before the local legislative body, thus giving every citizen his day in court, and requires the approval of the local authorities before the scheme becomes effective.

3. It provides a flexible scheme by which the restrictions can be removed at any time by the same method under which they were originally established.

4. It makes the unit one side of a block thus limiting the area of "betterment" or depreciation to reasonable limits.

5. It does not stand in the way of the commercial development of the city or even of a neighborhood in view of the smallness of the unit adopted. It permits business on one side of a street, residences on the other.

6. It excludes from within a residence district those classes of buildings which can be readily shown to be objectionable to the occupants of a residence district and to affect adversely property values.

A MODEL HOUSING LAW

NOTE 2: The diagram below shows how the plan would work out.

Taking the block A B C D, let us assume that three sides AB, BC and CD are established as "residence districts"; the remaining side AD, located on an avenue where business has already got a strong foothold and where business buildings are the only practical development, is not made a residence district.

NOTE 3: It is to be noted that under this section everything is excluded from a residence district except private dwellings and two-family houses and certain rear buildings on the back of the lot used in connection with them, as private garages, stables, and so forth. (See Section 30.) But no public garage or public stable, no apartment house or tenement house, no factory, loft, office building, store or shop, hotel or church can be erected there without the consent of two-thirds of the owners affected.

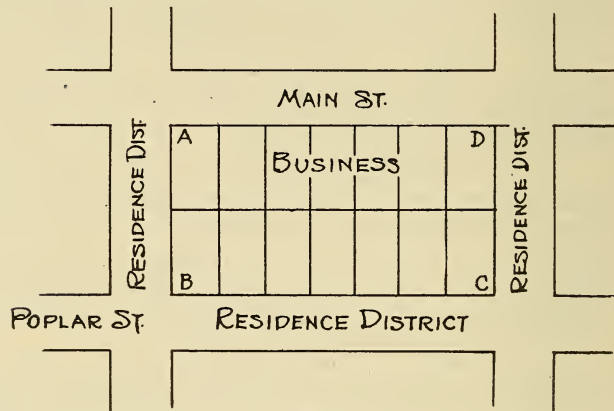


FIGURE 76

There is a point of danger that provisions of Zoning laws may establish lower standards as to percentage of lot that may be occupied, as to limitation of height and as to size of courts, rear yards, side yards and other open spaces; for, zoning laws frequently deal with these latter considerations. For this reason Section 158 dealing with Laws Repealed has been so worded that where there is conflict between the standards of the housing law and a Zoning regulation, the higher standard shall always prevail.

ZONING

In some cases it may well be that the higher standard will be found in the Zoning regulation, whereas, in other cases it will be found in the housing law. Under the scheme outlined in Section 158 no matter where it is found, the higher standard will always prevail.

In most states before the local authorities can adopt a Zoning ordinance or regulation it is necessary to obtain power from the state legislature. While it may be in some states that a specific grant of power of this kind is not needed, it is the part of wisdom to obtain it; for, the right to adopt regulations discriminating between different sections of a city, and to say that a building on one street may be used as a factory but that a building one block away cannot be so used; or that a building on one street may be erected to a height of 100 feet while one only a block away may go only to a height of 60 feet, are still somewhat novel questions in this country.

It is best to be on the safe side. It can do no harm to get a grant of power to do this specific thing, viz., to discriminate and provide different regulations for different parts of the same city. For this reason there is appended herewith a Model Zoning Enabling Act. It is practically a verbatim copy of the Enabling Act passed in New York State in 1917 based upon the law enacted originally for the city of New York and later extended to the entire state.

Persons seeking Zoning legislation will do well to adhere *closely* to this model. While it has not as yet been tested in court it has been carefully drawn by those who have given great attention to the subject and is believed to be adequate in all respects.

ZONING ENABLING ACT

AN ACT

To empower cities to regulate and limit the height and use of buildings and to regulate and determine the size and area of yards, courts and other open spaces and for said purpose to divide the city into districts.

The People of the State of represented in Senate and Assembly, do enact as follows:

Section 1. Each city in the state is hereby empowered to regulate and limit the height and bulk of buildings hereafter erected and to regulate and determine the area of yards, courts and other open spaces, and for said purpose to divide the city into districts. Such regulations shall be uniform for each class of buildings throughout any district, but the regulations in one or more districts may differ from those in other districts. Such regulations shall be designed to secure safety from fire and other dangers and to promote the public health and welfare, including, so far as conditions may permit, provision for adequate light, air and convenience of access, and shall be made with reasonable regard to the character of buildings erected in each district, the value of land and the use to which it may be put, to the end that such regulations may promote public health, safety and welfare and the most desirable use for which the land of each district may be adapted and may tend to conserve the value of buildings and enhance the value of land throughout the city.

Section 2. Each city is also empowered to regulate and restrict the location of trades and industries and the location of buildings, designed for specified uses, and for said purposes to divide the city into districts and to prescribe for each such district the trades and industries that shall be excluded or subjected to special regulation and the uses for which buildings may not be erected or altered. Such regulations shall be designed to promote the pub-

ZONING

lic health, safety and general welfare and shall be made with reasonable consideration, among other things, to the character of the district, its peculiar suitability for particular uses, the conservation of property values and the direction of building development, in accord with a well considered plan.

Section 3. This act shall take effect immediately.

INDEX

INDEX

	SECTION	PAGE
ABATEMENT		
of nuisance, procedure for.....	194, 196, 229	234, 236, 271
ACCESS		
sole, through bed room to other rooms		
forbidden.....	36	145
street to yard.....	57	193
to bottom of shafts and courts.....	126	258
to fire-escapes, obstruction of, for-		
bidden.....	52, 80, 127	184, 206, 258
to living rooms, bed rooms, and water-		
closet compartments.....	36	145
to plumbing pipes.....	49, 78	173, 205
to roof required.....	53, 129	187, 260
to second means of egress to be direct.....	51, 127	179, 258
ACCESSIBILITY		
of sewer connections and water sup-		
ply.....	9	65, 66
ACCOMMODATIONS		
See <i>Water-closet Accommodations</i>		
ACCUMULATIONS		
of dirt, etc., forbidden.....	101	220
ACT		
application.....	12	68
construction of, to be liberal.....	159	287
scope of.....	1	27
time when, takes effect.....	159	286
See also <i>Housing Law, Model</i>		
ACTIONS		
costs of.....	143, 144	269, 271
ADDITIONAL MEANS OF EGRESS.....	128	260
ADDITIONAL ROOMS AND HALLS.....	74	202
ADDRESSES		
indexing names and.....	152	279
AFFIDAVIT		
alleging correctness of plans, specifica-		
tions and statements shall be made		
by owner, agent or architect.....	140	263
AGENT		
may file plans for owner.....	140	263
owner's, written instrument designating.....	140	263
registry of name of, for service of proc-		
ess.....	149	277

INDEX

	SECTION	PAGE
AIR-INTAKES.....	27, 73	121, 201
AIR MOVEMENT.....	31	132, 134
AIR-SHAFTS		
See <i>Shafts</i>		
AIR SPACE		
cubic air content.....	31	134
in rooms, amount required.....	110	220
under entrance floor.....		162
ALCOVES AND ALCOVE ROOMS.....	76	141, 204
lighting and ventilation of.....	76	141, 204
ALLEY DWELLINGS.....	29	128
ALLEYS		
measurements of rear yard to middle line of.....	22	83
relation to rear yard requirements.....	22	87
to be kept clean.....	101	220
ALTERATION		
of buildings erected prior to act, in		
violation thereof, forbidden.....	4	60
of buildings into dwellings.....	3	57
of dwellings erected subsequent to act,		
in violation thereof, forbidden.....	4	60
of dwellings for store purposes.....	29	127
of dwellings of one class to dwellings of		
another class.....	3	57
of existing wooden multiple-dwelling.....	85	207
ALTERATIONS.....	70-86	200-208
and change in occupancy.....	4	60
before approval of plans forbidden.....	140	263
must be in accordance with approved		
plans and specifications.....	140	263
of old dwellings.....	3	57, 58, 59
permit for, cancellation of.....	140	263
permit for, expiration by limitation of.....	140	263
permit necessary.....	140	263
provisions relating to.....	70-86	200-208
unlawful, procedure to prevent.....	144	271
AMENDMENT		
of minimum requirements by local		
authorities forbidden.....	7	62
AMENITIES		
use of term.....	24	94, 110
ANGLES IN COURTS.....		124
ANIMALS		
keeping of certain, in dwelling or on		
premises forbidden.....	106	225
APARTMENT HOTELS		
included in Class A multiple-dwellings.....	2 (3)	34
APARTMENT HOUSES		
height limitation.....	21	77, 78
included in Class A multiple-dwellings.....	2 (3)	34

INDEX

	SECTION	PAGE
APARTMENTS		
number of, to be registered in health department.....	148	276
APPLICATION		
of model housing law.....	1	27
APPROVAL		
for alterations or construction, cancellation of.....	140	263
for alterations or construction, expiration by limitation of.....	140	263
of plans and specifications by health officer.....	140	263
APPROVED FIRE-RESISTIVE MATERIAL		
definition.....	2 (20)	54
AQUEDUCT		
definition.....	2 (21)	57
ARCHITECT		
may file plans for owner.....	140	263
AREA		
floor, of rooms.....	33, 74	136, 202
of windows in basement rooms.....	94	213
in interior rooms.....	120	240
in public halls.....	39, 75	156, 202
in rooms.....	32, 76, 120	135, 204, 240
in stair-halls.....	40, 75	157, 202
in water-closet compartments and bath rooms.....	37, 76, 78	147, 204, 205
AREAS		
to be concreted if required.....	45	164
to be graded and drained.....	45	164
to be kept clean.....	101	220
ARGUMENTS		
against act.....		293
ART GALLERIES		
windows in rooms used for.....	31	132
ASHES		
receptacles for.....	105	223
ASYLUMS		
included in Class B multiple-dwellings.....	2 (3)	35
ATTIC		
definition.....	2 (13)	46
rooms, height of.....	34	139
AUTOMOBILE		
See <i>Garages</i>		
BACHELOR APARTMENTS		
included in Class A multiple-dwellings.....	2 (3)	34
BALCONIES		
fire-escape.....	52, 80, 127	184, 206, 258

INDEX

	SECTION	PAGE
BALCONY FIRE-ESCAPES		
second means of egress.....	51, 127	179, 258
BALUSTERS, STAIR		
See <i>Stairs, Construction of</i>		
BASE		
waterproof, required for water-closet		
compartments.....	47, 78, 124	166, 205, 246
BASEMENT		
and cellar rooms.....	94	213
conditions of occupancy for living		
purposes.....	43, 94	161, 213
definition.....	2 (13)	46
depth of.....	44	162
drainage of.....	43, 44, 94, 125	161, 162, 213, 257
floors, to be watertight.....	44, 125	162, 257
height of.....	44, 94	162, 213
lighting and ventilation of.....	43, 44, 94	161, 162, 213
rooms.....	43	161
windows in, area of.....	94	213
BASEMENT; CELLAR; ATTIC		
definitions.....	2 (13)	46
BASEMENTS AND CELLARS.....	125	257
BASINS		
See <i>Catch-basins</i>		
BATH ROOMS		
inside, for apartment houses.....	37	150, 151
inside, for hotels.....	37	148, 149, 150
lighting and ventilation of.....	37, 76	147, 204
BED ROOM		
sole access to, through other rooms		
forbidden.....	36	145
BEDS		
ceiling.....	41 A	160
closet.....	41 A	160
folding.....	41 A	160
BINS		
for garbage, prohibited.....	105	223
BLOCK		
definition.....		377
BOARDERS		
regulation of.....	111	230-233
BOARDING HOUSES		
included in Class B multiple-dwellings.....	2 (3)	34
wooden.....	85	208
BOLTS		
movable, allowed on scuttles and bulk-		
heads.....	129	261
BOND		
not necessary for health department to		
give.....	157	284

INDEX

	SECTION	PAGE
BOSTON		
report of Mayor's housing commission.....	62	197
"three-deckers" in.....	62	196, 197
BUILDING		
code, amendment of.....		11, 12
difference between, and tenement		
house law.....		11, 12, 13
scope of.....		11, 12
construction of word.....	2 (20)	54
laws, three kinds of.....		11
line, fire-escapes may project beyond.....	52, 80	184, 206
operations, effect of act on.....		293
wooden, definition.....	2 (18)	52
BUILDING CODES, TENEMENT HOUSE		
LAW AND HOUSING LAWS.....		11-16
BUILDINGS		
converted or altered.....	3	57
converted or altered into dwellings,		
provisions governing.....	20-62	71-196
converted or altered into dwellings,		
subject to act relative to new dwell-		
ings.....	3	57
dangerous, proceedings relative to.....	112, 113	234, 236
on lot with dwelling, certain kinds pro-		
hibited.....	29, 30	125, 126, 130
repairs to, ordered or made by health		
officer.....	113	236
space between.....	29	125
types of, included in housing problem.....		13, 14, 15, 16
BULKHEADS.....	82	207
roof, direct access to, required.....	53, 129	187, 260
fire-resistive.....	53, 82, 129	187, 207, 260
key-locks on, to be removed.....	129	261
locking of door forbidden.....	115, 129	239, 261
movable bolts or hooks allowed on.....	129	261
stairs leading to.....	53, 54, 81, 115, 129	187, 189, 207, 239, 261
to be easily accessible to all occu-		
pants.....	115, 129	239, 261
to be kept free from incumbrance.....	115, 129	239, 261
to be located in ceiling of public hall.....	53, 129	187, 261
BUSINESSES		
dangerous.....	108	227
unlawful, procedure to prevent con-		
duct of.....	144	271
BUTLER'S PANTRIES		
hardwood floors in.....	122	246
CALF		
keeping of, in dwellings or on premises		
of multiple-dwellings prohibited.....	106	225
CASEMENT SASH.....	2 (12)	46
CATCH-BASINS.....	100	219

INDEX

	SECTION	PAGE
CELLINGS		
cellar, plastering of.....	125	257
cellar, whitewashing or painting of.....	95	215
height of in tropical countries.....	34	139
no paper to be placed on, until old paper is removed.....	104	222
roofs to be drained so as not to cause dampness in.....	97	216
to be cleaned before papering.....	104	222
to be kalsomined or painted white.....	103	222
to be kept clean.....	101	220
CELLAR		
ceiling, plastering of.....	125	257
ceiling, whitewashing or painting of.....	95	215
definition.....	2 (13)	46
depth of.....	44	162
elevator shaft in, fire-resistive doors to.....	58, 84	193, 207
entrance to, outside.....	61	196
floors, damp-proofing and water-proof- ing of.....	44, 125	162, 257
general toilet room in, supplementary to required water-closets, not pro- hibited.....	92	211
general water-closet accommodations in, prohibited.....	92	211
lighting and ventilation of.....	44, 125	162, 257
occupation of, for living purposes pro- hibited.....	42, 94	161, 213
rooms.....	42, 94, 125	161, 213, 257
stairs inside, prohibited.....	59	194
to be kept clean.....	101	220
walls and ceilings.....	95	215
walls, whitewashing or painting of.....	95	215
water-closets in, prohibited without written permit.....	47, 78, 92	166, 205, 211
water-proofing of.....	44, 125	162, 257
CELLARS AND BASEMENTS:.....	125	257
CELLARS, WATER-PROOFING AND LIGHT- ING.....	44	162
CELLS OF JAIL		
size of.....	33	136
CERTAIN DANGEROUS BUSINESSES.....	108	227
CERTIFICATE		
of approval of plans and specifications to be issued.....	140	263
CERTIFICATE OF COMPLIANCE.....	141	266
dwellings occupied without, to be va- cated.....	142	268
to be obtained before occupation of new or converted dwellings.....	141	266

INDEX

	SECTION	PAGE
CESSPOOLS		
prohibited.....	48, 124	172, 246
sewer connections.....	9	65
substitution of water-closets for.....	124	246
CHANGES FROM FIRST EDITION.....		vii-x
CHANGES IN THE LAW.....		vii
CHARTER		
construction of word.....	2 (20)	53
CHARTERS		
provisions of act to supersede conflict- ing provisions of.....	158	285
CHAUFFEUR'S QUARTERS.....	29	129
CHICAGO		
definition of tenement house in.....		13
height limitation in.....	24, 50	94, 178, 179
CHICKENS		
keeping of, in dwellings or on premises of multiple-dwellings prohibited.....	106	225
CHILDREN		
kitchenette apartments unsuitable for.....	33	138
CHUTES		
for garbage, prohibited.....	105	223
CIRCUIT COURT		
definition.....	144	273
CISTERNS		
and wells.....	99	219
no opening in, for drawing water with pails or buckets.....	99	219
size, number, construction and main- tenance of, to be determined by health officer.....	99	219
to be provided with attachment for drawing water.....	99	219
CITIES HAVING HOUSING LAWS.....		vi
CITY ENGINEER		
powers conferred by act on, addi- tional.....	154	282
CITY PLANNING MOVEMENT		
effort in, necessary to reach ideal con- ditions.....	21	80, 338, 339
CITY TREASURY		
construction of words.....	2 (20)	53, 54
CITY WATER		
definition of.....	2 (20)	54, 56
CLASSES OF DWELLINGS.....	2 (2)	32
CLASSES OF MULTIPLE-DWELLINGS.....	2 (3)	34
CLASSIFICATION		
of provisions of model housing law.....		21

INDEX

	SECTION	PAGE
CLEANLINESS OF DWELLINGS.....	101	220
CLOSET		
under first story stairs.....	60	196
under stairs to upper stories forbidden.....	60	196
CLOSET UNDER FIRST STORY STAIRS.....	60	196
CLOSETS		
See <i>Water-closets</i>		
CLUB HOUSES		
included in Class B multiple-dwellings.....	2 (3)	34
COLUMBUS, OHIO		
definition of tenement house in.....		13
COMBUSTIBLE MATERIALS.....	107	226
storage of, prohibited.....	107	226
COMMISSIONER OF PUBLIC SAFETY		
construction of words.....	2 (20)	53, 54
powers conferred by act on, additional.....	154	282
right of entry given.....	156	283
COMPLIANCE		
certificate of. See <i>Certificate of Com-</i>		
pliance		
time for, by owners of existing dwell-		
ings.....	11	67
CONCESSIONS		
explanation of, in model housing law.....		23
CONCRETING		
of areas, courts and yards.....	45	164
CONDEMNATION		
of infected and uninhabitable houses,		
proceedings for.....	112, 113	234, 236
CONFLAGRATION HAZARD.....	24	94, 110
CONSTRUCTION		
before approval of plans, forbidden.....	140	263
dwellings.....	8	65
must be in accordance with approved		
plans and specifications.....	140	263
permit for, cancellation of.....	140	263
permit for, expiration by limitation.....	140	263
permit necessary.....	140	263
unlawful, procedure to prevent.....	144	271
CONSTRUCTION OF ACT TO BE LIBERAL.....	159	287
CONSTRUCTION OF CERTAIN WORDS.....	2 (20)	53
CONTACT DISEASES		
relation of, to lodger evil.....	111	231, 232
CONVENTS		
included in Class B multiple-dwellings.....	2 (3)	34
CONVERSION		
of building to dwelling.....	3	57
of dwellings of one to another class.....	3	57, 58, 59

INDEX

	SECTION	PAGE
CORNER AND INTERIOR LOTS.....	2 (8)	43
CORNER LOT		
definition.....	2 (8)	43
relation to several buildings on lot.....	29	130
See also <i>Lot</i>		
CORNICES.....	2 (16), 24	50, 51, 107
CORPORATION COUNSEL		
construction of words.....	2 (20)	53, 54
COSTS		
in actions or proceedings under this act.....	143, 144	269, 271
of workmen's dwellings, reduction of.....	34	139
COTTON		
storage of, forbidden.....	107	226
COURT		
definition.....	2 (7)	41
inner, definition.....	2 (7)	41
outer, definition.....	2 (7)	41
COURTS.....	2 (7), 25	41, 113
access to bottom of.....	126	258
and shafts.....	126	258
angles in.....	28	124
changes in model housing law neces-		
sary to prohibit.....		338
elimination of, by shallow lots.....		338
fire-escapes in, forbidden.....	52, 80	184, 206
inner, air-intakes for.....	27, 73	121, 201
inner, passageways for.....	27, 73	121, 201
method of measuring height.....	25	113
minimum size not to be decreased by		
other buildings.....	29	125
new, in existing dwellings.....	73	201
open at top.....	26, 73	119, 201
size of.....	25, 73	113, 201
table showing minimum widths and		
lengths for various heights of build-		
ings.....	25	116
to be concreted if required.....	45	164
to be graded and drained.....	45	164
to be kept clean.....	101	220
walls of, to be whitewashed or painted.....	102	221
width of.....		295
width proportionate to height.....	25	113
COURTS, AREAS AND YARDS.....	21, 45	82, 164
Cow		
keeping of, in dwelling or on premises		
of multiple-dwellings prohibited.....	106	225
CUBIC FEET OF AIR REQUIRED.....	31, 110	134, 229
CURB LEVEL.....	2 (15)	50
definition.....	2 (15)	50

INDEX

	SECTION	PAGE
DAMAGE		
to dwellings.....	6	62
DAMPNESS		
provision for ventilation and protec- tion from.....	44, 125	162, 257
DAMP-PROOFING		
of foundation walls.....	44, 125	162, 257
of lowest floor.....	44, 125	162, 257
DANGEROUS BUILDINGS		
proceedings relative to.....	112, 113	234, 236
DANGEROUS BUSINESSES.....	108	227
DECISIONS		
Health Department vs. Rector.....	98	218
Tenement House Department vs. Moeschen.....	124	248
DEFINITION		
of certain words.....	2 (20)	53, 54
DEFINITIONS.....	2	30
DEPARTMENT CHARGED WITH THE EN- FORCEMENT OF THIS ACT		
construction of words.....	2 (20)	53, 54
DEPTH OF LOT		
definition.....	2 (9)	43
DIAGRAMS		
model housing law, explanation of.....		22
DIRT		
accumulations of, forbidden.....	101	220
DISCRETIONARY POWER		
in modifying provisions of act-forbidden.....	7	62
DISEASES		
See <i>Contact Diseases</i>		
DISTANCE		
between two buildings.....		295
DISTRICTS		
See <i>Residence Districts</i>		
DOOR		
sash, equivalent of window.....	40	157
DOORS		
at bottom of shafts and courts.....	126	258
communicating between rooms for		
cross-ventilation.....	31	134
fire-resistive, to elevator shaft.....	58, 84	193, 207
self-closing, to dumb-waiter shafts.....	58, 84	194, 207
to be kept clean.....	101	220
to halls of dwellings from paint, oil, drug and liquor stores forbidden.....	108	227
DOUBLE HOUSE.....	2	32

INDEX

	SECTION	PAGE
DRAINAGE		
of areas, courts and yards	45	164
of basement rooms	43, 44, 94, 125	161, 162, 213, 257
DRAINS	49, 78	173, 205
to be kept clean	101	220
See also <i>House Drains</i>		
DRIP TRAYS		
prohibited	47, 78	166, 205
DRUG STORES		
doors, windows or transoms to halls of		
dwellings from, forbidden	108	227
DUCKS		
keeping of, in dwellings or on premises		
of multiple-dwellings prohibited	106	225
DUMB-WAITERS		
and elevators	58, 84	193, 207
enclosed in fire-resistive shafts	58, 84	193, 207
fire-resistive doors to	58, 84	193, 207
self-closing doors to	58, 84	193, 207
DUPLEX		
See <i>Two-Family Dwelling</i>		
DUPLEX APARTMENTS		
included in Class A multiple-dwellings	2 (3)	34
DWELLING	2 (1)	31
building on same lot with	29, 30	125, 126, 130
construction of word	2 (20)	53
definition	2 (1)	31
definition of fire-resistive	2 (17)	51
definition of multiple	2 (2)	32
definition of private	2 (2)	32
definition of two-family	2 (2)	32
DWELLINGS		
alley	29	128
classes of	2 (2)	32
cleanliness of	101	220
construction	8	65
conversion or alteration of other build-		
ings to	3	57
converted or altered from one to an-		
other class	3	57
damaged	6	62
dangerous, proceedings relative to	112, 113	234, 236
fire-resistive, when required	50, 79	178, 206
height of, proportionate to width of		
street	21, 71	75, 200
ideal lighting and ventilation of		337, 338
inspection of	155	282
keeping of animals in, or on premises	106	225
may be vacated if erected, altered or		
occupied contrary to law	4	60

INDEX

	SECTION	PAGE
DWELLINGS (Continued)		
occupation of new, altered or converted, without certificate of compliance unlawful	141, 142	266, 268
occupied without certificate of compliance to be vacated	142	268
rear	29	127
repair of	97	216
to be cleaned to satisfaction of health officer	101	220
two rooms in depth		337, 338
DWELLINGS HEREAFTER ERECTED	20-62	71-196
DWELLINGS MOVED	5	61
discretionary power in case of	5	61
EARTHENWARE		
house drains, prohibited	49, 78	173, 205
EASEMENT AGREEMENT		
arrangement for side yards	24	95, 103
EAVES	2 (16), 24	50, 51, 107
EAVES AND CORNICES		
overhanging side yards	24	107
EFFECT		
time when act takes	159	286
EGRESS		
existing fire-escapes to have safe means of, from yard or court to street, alley, or adjoining premises	127	258
means of, in case of fire, 51, 52, 53, 80, 81, 115, 127, 128, 129		179, 184, 187, 206 207, 239, 258, 260
municipal authorities may enact supplementary ordinances relative to	7	62
roof	53, 81, 129	187, 207, 260
second means of, in Class A multiple-dwellings must be directly accessible to each apartment, suite or group of rooms	51, 127	179, 258
second means of, in Class B multiple-dwellings must be directly accessible to public hall	51, 127	179, 258
second means of, may be balcony fire-escapes, additional inside or outside stairs, fire tower	51, 127	179, 258
superintendent of buildings shall order such additional means of, as may be necessary	128	260
superintendent of buildings shall require proper means of, in case of existing multiple dwellings	127	258
two separate means of, to extend from entrance floor to roof	51, 127	179, 258
ELEVATOR		
shafts to be fire-resistive	58, 84	193, 207
shafts to have fire-resistive doors	58, 84	193, 207

INDEX

	SECTION	PAGE
ELEVATORS.....	58, 84	193, 207
in well-hole of stairs prohibited.....	58	193
separated from stairs by fire-resistive walls.....	58, 84	193, 207
ELIZABETH GROUP HOUSES.....	24	109
ENACTING CLAUSE		
of model housing law.....		27
ENFORCEMENT.....	153	279
mayor to designate official for.....	153	280
of act, State Board of Health may examine into.....	10	67
of housing laws.....		6
of supplementary provisions.....	7	63
records to be kept by enforcing official.....	153	280
ENGLISH LAW		
height of buildings.....	21	80
ENTRANCE		
outside, to cellar or lowest story required.....	61	196
ENTRANCE FLOOR		
See <i>Floor, Entrance</i>		
ENTRANCE HALLS.....	57	193
See also <i>Halls, Entrance</i>		
ENTRY		
right of.....	156	283
EVICITION		
of tenant for non-compliance with act.....	111, 145	230, 274
EXCAVATION		
depth of, under entrance floor.....	44	162
EXCELSIOR		
storage of, forbidden.....	107	226
FALSE SWEARING		
deemed perjury.....	140	263
FAMILIES		
number of, to be registered in health department.....	148	276
FEATHERS		
storage of, forbidden.....	107	226
FEDERAL GOVERNMENT STANDARDS		
relation of rear yard to height of buildings.....	25	115, 116
FEED		
storage of, forbidden.....	107	226
FILING		
of agent's name for service of process.....	149	277
of certified copy of judgment.....	146	275
of lis pendens.....	147	275

INDEX

	SECTION	PAGE
FILING (Continued)		
of names and addresses of owner and lessee, number of apartments, num- ber of rooms in each apartment and number of families.....	148	276
of plans, specifications, plat of lot, statement of ownership, etc.....	140	263
FILTH		
accumulations of, forbidden.....	101	220
FINES		
for violation of act.....	143	269
lien upon property.....	143	269
FIRE		
dwellings damaged by.....	6	62
means of egress in case of... 51, 52, 53, 80, 81, 115	179, 184, 187, 206,	
127, 128, 129	207, 239, 258, 260	
space around plumbing pipes to be made air-tight to prevent spread of.....	49, 78	173, 205
FIRE COMMISSIONER		
permit required for storage of com- bustible materials.....	107	226
FIRE-ESCAPE		
balconies, covers over openings in, prohibited.....	52, 80	184, 206
balconies, lowest, to have drop-ladder or stairs.....	52, 80, 127	184, 206, 258
balconies on top floor to be provided with stairs or ladder to roof.....	52, 80	184, 206
balconies, openings for stairways in... 52, 80, 127	184, 206, 258	
balconies, width of.....	52, 80, 127	184, 206, 258
balcony, second means of egress.....	51, 127	179, 258
stairways.....	52, 53, 80, 81, 127, 129	184, 187, 206, 207, 258, 260
FIRE-ESCAPES.....	52, 80, 114	184, 206, 239
existing, not to be extended or relo- cated except on approval of superin- tendent of buildings.....	127	258
existing, to be made to conform to cer- tain requirements.....	127	258
existing, to have safe means of egress from yard or court to street, alley, or adjoining premises.....	127	258
in courts forbidden.....	52, 80	184, 206
incumbrance of.....	114	239
located on each story.....	52, 80	184, 206
may project beyond building line.....	52, 80	184, 206
must be constructed to sustain safe load.....	52, 80	184, 206
obstruction of access to, forbidden... 52, 80, 127	184, 206, 258	
outside open, of iron, stone or concrete required.....	52, 80, 127	184, 206, 258
outside stairs in lieu of.....	52, 80	184, 206
painting of.....	52, 80, 114	184, 206, 239

INDEX

	SECTION	PAGE
FIRE-ESCAPES (Continued)		
superintendent of buildings shall require proper, in case of existing multiple-dwellings.....	127	258
supplementary regulations of superintendent of buildings to govern construction of.....	52, 80	184, 206
to be kept in good repair.....	114	239
FIRE HAZARD		
and high pressure service.....	21	79
high buildings.....	21	78, 79
FIRE LIMITS		
construction of words.....	2 (20)	53
FIRE MARSHAL		
to enforce certain provisions.....	107, 153	226, 280
FIRE PREVENTION		
municipal authorities may enact supplementary ordinances relative to.....	7	62
FIREPROOF		
See <i>Fire-resistive</i>		
FIRE PROTECTION.....		
joint conference on fire tests.....	50-62 2 (20)	178-196 54, 56
FIRE-RESISTIVE		
doors to elevator shaft and dumb-waiters.....	58, 84	193, 207
dwelling, definition.....	2 (17)	51
dwellings, when required.....	50, 79	178, 206
enclosure of stair halls.....	56	190
scuttles or bulkheads in roof.....	53, 82, 129	187, 207, 260
self-closing doors in halls.....	56	190
shafts for elevators and dumb-waiters.....	58, 84	193, 207
stair halls.....	55	189
FIRE-RESISTIVE DWELLING.....		
definition of.....	2 (17)	51
when required.....	50	178
FIRE-RESISTIVE DWELLINGS.....		
	79	206
FIRE-RESISTIVE MATERIAL		
definition of.....	2 (20)	54, 56
FIRE TOWER		
second means of egress.....	51, 127	179, 258
FIRE UNDERWRITERS' BUILDING CODE.....		
	2 (17)	52
FLATS		
included i Class A multiple-dwellings.....	2 (3)	34
FLOOR		
area of rooms.....	33, 74	136, 202
basement and cellar, to be water-tight.....	44, 125	162, 257
beneath and around water-closets and sinks to be kept in good order and painted.....	96, 122, 123	215, 245, 246

INDEX

	SECTION	PAGE
FLOOR (Continued)		
butler's pantry	122	246
entrance, air-space under, to be en- closed	44	162
entrance, depth of excavation under	44	162
entrance, elevation of, above ground	44	162
lowest, damp-proofing and water- proofing of	44, 125	162, 257
to be kept clean	101	220
water on each	98	217
water-closet compartment, to be water-proof	47, 78, 124	166, 205, 246
FLOORS, STAIR HALL See <i>Halls, Stair</i>		
FLUSH TANKS to be provided for new water-closets	124	246
FOUNDATION WALLS damp-proofing and water-proofing of	44, 125	162, 257
FRAME See <i>Wooden</i>		
FRONT buildings and rear, space between	29	125
line uniformity, and set-backs	21	77, 82
FRONT OF LOT definition	2 (9)	43
FRONT; REAR; AND DEPTH OF LOT	2 (9)	43
FRONT YARDS See <i>Yards</i>		
FRONTAGE ON STREET	29	127-130
FURNISHED-ROOM HOUSES included in Class B multiple-dwellings	2 (3)	35
GARAGES and rear yard requirements	23	92
permitted at rear of lot	29, 30	125, 126, 130
public prohibited	30	130
relation to rear dwelling prohibition	29	129
GARBAGE accumulations of, forbidden	101	220
receptacles for	105	223
GEESE keeping of, in dwellings or on premises of multiple-dwellings prohibited	105	225
GENERAL PROVISIONS	1-12	27-68
GENERAL TOILET ROOM separate water-closet compartments in	37, 76, 78	147, 204, 205
supplemental to required water-closets not prohibited	47, 78, 92	166, 205, 211
GOAT keeping of, in dwellings or on premises of multiple-dwellings prohibited	105	225

INDEX

	SECTION	PAGE
GOVERNOR		
may request State Board of Health to examine into and report on enforce- ment of act.	10	67
GRADING		
of areas, courts and yards.	45	164
GREAT BRITAIN		
height limitation in England.	21	80
lighting and ventilation practice in.		337
GROUP HOUSES.	24	109
GYMNASIUMS		
windows in rooms used for.	31	132
HABITATION		
basement rooms occupied for living purposes to be fit for human.	43, 94	161, 213
dwellings unfit for human, to be va- cated.	112	234
new and converted dwellings occupied without certificate of compliance deemed unfit for.	141, 142	266, 268
HALL, PRESCOTT F.	62	197
HALLS		
additional, to be constructed in accor- dance with provisions of Article 11.	74	202
entrance.	54, 57	189, 193
entrance, access from, to street or alley through yard.	57	193
entrance, construction of.	54, 57	189, 193
entrance, width of.	57	189
public, and stairs.	54, 83	189, 207
public, construction of.	57, 74, 83	189, 202, 207
public, definition.	2 (10)	45
public, lighting and ventilation of 38, 75, 90, 91, 121		152, 202, 210, 244
public, second means of egress must be directly accessible to.	51, 127	179, 258
public, size of windows in.	39, 75	156, 202
public, skylights in.	39, 77, 121	156, 204, 244
public, transom, windows or doors to, from paint, oil, drug and liquor stores forbidden.	108	227
public, width of.	54, 57, 83	189, 193, 207
recessed, deemed separate hall.	38	152
stair, construction of.	54, 55, 57, 74, 83	189, 193, 202, 207
stair, definition.	2 (11)	45
stair, fire-resistive.	55	189
stair, fire-resistive enclosure of.	56	190
stair, fire-resistive self-closing doors in.	56	190
stair, lighting and ventilation of.	40, 75, 90, 91, 121	157, 202, 210, 245
stair, size of windows.	40, 75	157, 202
stair, transoms in, forbidden.	56	190
stair, width of.	54, 57, 83	189, 193, 207
to be kept clean.	101	220

INDEX

	SECTION	PAGE
HAY		
storage of, forbidden	107	226
HEALTH		
storage of articles dangerous to, for-		
bidden	107	226
things dangerous or detrimental to	112	234
HEALTH DEPARTMENT		
construction of words	2 (20)	53
versus Rector	98	218
HEALTH DEPARTMENT OR OFFICER		
actions of, to be regarded as judicial	144	271
additional powers conferred on, by act	154	282
approval of changes in plans by	140	263
costs, expenses or disbursements of, in		
removal of nuisance to be paid by		
owner or person violating act, order		
or notice	143	269
definition		53
dwellings to be cleaned to satisfaction		
of	101	220
examination and approval of plans and		
specifications by	140	263
filing of lis pendens by	147	275
filing of plans, specifications and state-		
ments for construction, alteration or		
conversion of dwellings in	140	263
injunction against, not to be granted		
except upon three days' notice	157	284
inspection of dwellings by	155	282
may fix time for compliance with act	11	67
may institute proceedings	144	271
may order and make repairs	113	236
may order cutting in of windows and		
skylights or other improvements	121	244
may order dwellings to be vacated and		
may revoke same or extend time for		
vacation	112	234
may require all-night lighting of public		
halls	91	210
may require artificial day lighting of		
public halls	91	210
may require concreting of courts,		
areas and yards	45	164
may require janitor, housekeeper, or		
other responsible person to live in		
multiple-dwelling	109	228
may require kalsomining or painting of		
walls and ceilings of interior rooms	103	222
may require open plumbing in new		
dwellings	49	173
may require plastering of cellar ceilings	125	257
may require renewal of paint or white-		
wash on cellar walls and ceilings	95	215
may require renewal of paint or white-		
wash on walls of court	102	221

INDEX

	SECTION	PAGE
HEALTH DEPARTMENT OR OFFICER		
(Continued)		
may vacate infected or uninhabitable dwellings.....	112	234
may vacate unlawful dwellings.....	4, 142	60, 268
not required to give undertaking.....	157	284
not to be liable for costs in actions brought under the act.....	144	271
penalty for violation of order or notice of.....	143	269
powers conferred by act on, additional.....	154	282
preliminary injunction against.....	157	284
privy vaults, school-sinks and water-closets to be removed and place disinfected under direction of health officer.....	124	246
registry of agent's name in.....	149	277
registry of owner's name and description of property in.....	148	276
revocation of approval or permit by.....	140	263
right of entry given.....	156	283
service of notices and orders of.....	150	278
service of summons in actions brought by.....	151	278
shall enforce provisions of act.....	153	279
shall file certified copy of judgment in office of county clerk.....	146	275
shall index names and addresses filed.....	152	279
to approve plans and specifications for construction, alteration or conversion of dwellings.....	140	263
to determine number of catch-basins.....	100	219
to determine practicability of sewer and water connections.....	9	65
to determine size, number, construction and maintenance of cisterns and wells.....	99	219
to determine size of skylights.....	77	204
to enforce act.....	153	279
to grant certificate of compliance.....	141	266
to prescribe conditions under which certain animals may be kept on premises with dwelling.....	106	225
when, may make repairs.....	113	236
written consent of, to be obtained before letting lodgings.....	111	230
written permit of, necessary for construction or maintenance of water-closets in cellar.....	47, 92	166, 211
written permit of, necessary for occupation of basement rooms for living purposes.....	94	213
HEALTH OFFICER		
construction of words.....	2 (20)	53
discretion of, as to lodgers, roomers and boarders.....	111	230

INDEX

	SECTION	PAGE
HEALTH OFFICER (Continued)		
party to easement agreement.....	24	95, 104
See also <i>Health Department</i>		
HEIGHT.....	2 (14), 21, 71	49, 75, 200
definition.....	2 (14)	49
high buildings, shadows cast by.....	21	80, 81
limitation, and zoning laws.....	21	77, 78
of apartment houses limited.....	21, 23	77, 78, 93, 94
of basement rooms.....	44, 94	162, 213
of courts.....	25	113
of dwellings in Chicago.....	50	179
of dwellings proportionate to width of		
street.....	21, 71	75, 200
of rooms.....	34, 74	139, 141, 202
HEIGHT OF BUILDINGS		
commission's report.....	21	78, 79
HIGH BUILDINGS		
and fire hazard.....	21	78, 79
HIGH ROOMS		
advantages of.....	34	139
HINGED SASH.....	2 (12)	46
HOOKS		
movable, allowed on scuttles and bulk-		
heads.....	129	260
HOPPER CLOSETS		
long, prohibited.....	49, 78, 124	173, 205, 246
HORSE		
not to be kept on premises except		
under conditions prescribed by		
health officer.....	106	225
HOSPITALS		
included in Class B multiple-dwellings.....	2 (3)	34
HOTEL.....	2 (4)	36
definition.....	2 (4)	36
HOTELS		
and side yard requirements.....	24	108
exempted from rear yard provisions.....	22	83
included in Class B multiple-dwellings.....	2 (3)	34
in residence districts.....	24	109
inside bath rooms in.....	37	148, 149, 150
relation of Zoning Act to.....	21	76
ventilation and lighting of public		
halls.....	37, 38, 39	150-156
HOUSE		
construction of word.....	2 (20)	53
HOUSE DRAINS		
tile or earthenware, prohibited.....	49, 78	173, 205
HOUSEKEEPER		
when necessary.....	109	228

INDEX

	SECTION	PAGE
HOUSES		
continuous rows or terraces of, on		
different size lots.....		294, 302, 303, 304, 305, 328-334
detached, on different size lots.....		294-302, 305-327
double.....	2	32
semi-detached.....	2	32
two main groups.....		294
HOUSING		
methods for providing good.....		6, 7
HOUSING EVILS		
extent of.....		16
legislation effective remedy for.....		5, 6, 7
present.....		5
HOUSING LAW		
an ideal.....		337, 338
difference between, and tenement		
house law.....		14, 15, 16
difficulty of preparing.....		20
effort to secure model tenement house		
law instead of, sometimes wise.....		23
ideal.....		337, 338
ideal, consideration of.....		23
inadequacy of short.....		21
model, adaptation to local conditions.....		21
model, application of.....		27
model, arguments against.....		293
model, caution to those using.....		23, 24
model, changes in, generally disastrous.....		23, 24
model, changes in, necessary to pro-		
hibit courts and shafts.....		338, 339
model, classification of provisions of.....		21
model, effect of on building operations.....		293
model, enacting clause.....		27
model, explanation of notes, diagrams,		
concessions, and variations in.....		22, 23
model, how to use.....		19-24
model, importance of following strictly.....		22, 23, 24
model, no modification of.....	7	62
model, practicability of.....		293
model, purpose of.....		19, 20
model, scope of.....	12	14, 15, 16, 20, 68
model, title of.....		27
HOUSING LAWS		
basis for, in United States.....		11-16
local variations in.....		19
		19, 20
HOUSING LEGISLATION		
aim of housing reformer.....		14, 15, 16
HOUSING PROBLEM		
conditions constituting.....		4, 5
many sided.....		4, 7

INDEX

	SECTION	
HOUSING PROBLEM (Continued)		
report of Mayor of Boston.....	62	197
solution of, dependent on conception of housing reform.....		3
types of buildings included in.....		13, 14, 15, 16
HOUSING PROBLEMS IN AMERICA.....	62	197, 233
(National Housing Association Publications)		
HOUSING REFORM		
incentive to take up.....		5
results test of methods in.....		7
through attractive houses.....		5
building code.....		11, 12
cheap houses.....		3
development of Garden Cities.....		5
education.....		5
example.....		5
intelligent city planning.....		5
legislation.....		3-7, 11-16
more houses.....		4
rapid transit.....		3, 4, 5
stimulation of country life.....		5
tenement house legislation.....		12, 13, 14
wise management.....		5
HOUSING REFORM. By Lawrence Veiller.....		55, 62
HOUSING REFORM THROUGH LEGISLATION.....		3-7
HOW TO USE THE MODEL LAW.....		19-24
HUMAN HABITATION		
See <i>Habitation</i>		
IDEAL HOUSING LAW, AN.....		337-339
IMPRISONMENT		
for violation of act.....	143	269
IMPROVEMENTS		
compulsory.....	120-129	240-260
health department may order and make.....	113, 121	236, 244
INCUMBRANCE		
of fire-escapes.....	114	239
scuttles, bulkheads, ladders and stairs to be kept free from.....	115, 129	239, 260
INDEXING NAMES.....	152	279
INFECTED AND UNINHABITABLE DWELL- INGS TO BE VACATED.....	112	234
INFECTED HOUSES		
proceedings for vacation of.....	112	234
INFLUENZA		
its relation to lodger evil.....	111	231
INJUNCTION; UNDERTAKING.....	157	284

INDEX

	SECTION	PAGE
INNER COURTS.....	21	82
See also <i>Courts</i>		
INSIDE BATH ROOMS FOR APARTMENT HOUSES....	37	150, 151
INSIDE BATH ROOMS PROHIBITED		
discussion of.....	37	147, 148, 149, 150
INSIDE STAIRS		
See <i>Stairs</i>		
INSPECTION OF DWELLINGS.....	155	282
INSPECTOR OF BUILDINGS		
construction of words.....	2 (20)	53
existing fire-escapes not to be extended		
or relocated except on approval of.....	127	258
may require hinged scuttles.....	129	261
powers conferred by act on, additional.....	154	282
prohibited from issuing permit.....	140	264
shall order such additional means of		
egress as may be necessary.....	128	261
shall require proper means of egress in		
case of existing multiple-dwellings.....	127	258
supplementary regulations of, to gov-		
ern construction of fire-escapes.....	52, 80	184, 206
to enforce certain provisions of act.....	153	279
INTAKES		
See <i>Air-intakes</i>		
INTERIOR LOT		
definition.....	2 (8)	43
See also <i>Lot</i>		
INTERIOR ROOMS		
See <i>Rooms</i>		
JAILS		
included in Class B multiple-dwellings.....	2 (3)	35
size of cells in.....	33	136, 137, 138
JANITOR OR HOUSEKEEPER.....	109	228
JOINT CONFERENCE ON FIRE TESTS.....	2 (20)	54, 56
JUDGMENT		
copy of, to be filed in County Clerk's		
office.....	146	275
to establish penalty as lien.....	146	275
JUDICIAL		
actions of health officer to be regarded		
as.....	144	271
JUNK		
storage and handling of, forbidden.....	106	225
KALSOMINING		
of walls and ceilings.....	103	222

INDEX

	SECTION	PAGE
KEY-LOCKS		
to be removed from roof bulkheads and scuttles.....	129	261
KITCHENETTE APARTMENTS		
included in Class A multiple-dwellings.....	2 (3)	34
social disadvantage of.....	33	138
unsuitable for children.....	33	138
KITCHENETTES		
size of.....	33	136, 137, 138
LADDERS		
leading to roof bulkheads or scuttle..	53, 81, 115, 129	187, 207, 239, 260
to scuttle or bulkheads to be easily accessible to all occupants.....	115, 129	239, 261
to scuttle or bulkhead to be kept free from incumbrance.....	115, 129	239, 261
LAKE		
definition.....	2 (21)	57
LAW OF "ANCIENT LIGHTS"		
height limitation in England.....	21	80
LAWS		
See <i>Act; English Law; Housing Law;</i> <i>Tenement House Law</i>		
LAWS BASED ON MODEL LAW.....		vi
LAWS EXISTING		
dwellings to conform with.....	8	65
LAWS REPEALED.....	158	285
LEADERS		
rain, necessary.....	97	216
LEAKY ROOFS.....	97	216
LEASE		
cancellation of tenant's for non-com- pliance with regulation.....	111	230, 231
LEGAL DECISIONS		
Health Department vs. Rector.....	98	218
Tenement House Department vs. Moeschen..	124	248
LEGAL PROVISIONS.....	140-159	262-289
LEGISLATION		
enforcement of.....		6
housing reform through.....		3-7, 11-16
kind of, required for housing reform.....		11-16
See also <i>Housing Law; Tenement</i> <i>House Law</i>		
LESSEE		
may file agent's name for service of process.....	149	277
of whole house to register name and address.....	148	276

INDEX

	SECTION	PAGE
LIEN		
fine for violation of act or order of health officer, upon property	143	269
LIENS	146	275
LIFE		
storage of articles dangerous to, for- bidden	107	226
LIGHT		
and height limitation	21	80, 81
and ventilation	20-41	71-158
municipal authorities may enact sup- plementary ordinances relative to	7	63
LIGHTING		
ideal, of dwellings		337, 338
night, of halls and stairs	91	210
night, of water-closet compartments	47, 78	166, 205
of alcoves and alcove rooms	35, 75, 76	141, 202, 204
of basements	43, 44, 94	161, 162, 213
of bath rooms	37, 76	147, 204
of cellars	44, 125	162, 257
of halls and stairs by day	90	210
of interior rooms	120	240
of public halls	38, 75, 90, 91, 121	152, 202, 210, 244
of rooms	31, 32, 35, 75, 76, 120	132, 135, 141, 202, 204, 240
of stair halls	40, 75, 90, 91, 121	157, 202, 210, 244
of water-closet compartments	37, 47, 76, 78, 124	147, 166, 204, 205, 246
walls and ceilings to be kalsomined or painted white if necessary to im- prove	103	222
LIQUOR STORES		
doors, windows or transoms to halls of dwellings forbidden	108	227
LIS PENDENS	147	275
LIVING ROOMS		
access to	36	145
in basement, conditions of occupancy	43, 94	161, 213
in cellar, prohibited	42, 94	161, 213
LOCKING		
of scuttle or bulkhead door forbidden	115, 129	239, 261
LOCKS		
key, to be removed from scuttles and bulkheads	129	261
LODGER EVIL		
difficulty of coping with	111	231, 232
LODGERS PROHIBITED	111	230
LODGING HOUSES		
included in Class B multiple-dwellings	2 (3)	34

INDEX

	SECTION	PAGE
LODGINGS		
letting of, in dwellings without consent of health officer prohibited	111	230
occupant responsible for compliance with provisions relating to	111	230
owner responsible for compliance with provisions relating to	111	230
LOT		
building on same, with dwelling	29	125
construction of word	2 (20)	53
corner, definition	2 (8)	43
definition	2	30
front, rear and depth of, definition	2 (9)	43
method of placing houses on	24	99
percentage of, permitted to be occupied	20, 70	71, 200, 295
plat of, to be submitted with plans and specifications, for approval of health officer	140	263
LOTS		
corner and interior, definition	2 (8)	43
different size, development of each kind of building on		293-334
shallow, required for ideal lighting and ventilation conditions		99, 337, 338
MAINTENANCE 90-115		
municipal authorities may enact sup- plementary ordinances relative to	7	62
unlawful, procedure to prevent	144	271
MANDATORY PROVISION OF ACT	2(20)	53
MAYOR		
construction of word	2 (20)	53, 54
to designate official for enforcement	153	280
MEANS OF EGRESS 51		
See also <i>Egress</i>		179
MENACE OF THE "THREE-DECKER"	62	196, 197
METHODS		
results test of, in housing reform		7
MINIMUM REQUIREMENTS; LAW NOT TO BE MODIFIED 7		
MISDEMEANOR		
violation of act is a	143	269
MIXED OCCUPANCY 2 (5)		
definition	2 (5)	37
MODEL HOUSING LAW		
See <i>Housing Law, Model</i>		
MODEL TENEMENT HOUSE LAW, A. By Lawrence Veiller		
See also <i>Tenement House Law, Model</i>		19

INDEX

	SECTION	PAGE
MODIFICATION		
of law forbidden.....	7	62
MOESCHEN CASE.....	124	248
MULES		
keeping of, prohibited.....	106	225
MULTIPLE-DWELLINGS		
alteration or conversion of wooden		
buildings to, prohibited.....	62	196
Class A, definition.....	2 (3)	34
Class B, definition.....	2 (3)	34, 35
classes of.....	2 (3)	34
construction of word.....	2 (20)	53
definition.....	2 (2)	32
different provisions for Classes A and B.....	2 (3)	36
enlargement of existing, except for		
water-closets or bath rooms, pro-		
hibited.....	85	207
erection of wooden, prohibited.....	62	196
existing wooden buildings on same lot		
with, within fire limits, not to be en-		
larged.....	86	208
wooden buildings not to be placed on		
same lot with, within fire limits.....	86	208
MUNICIPAL AUTHORITIES		
action of, not to modify, repeal,		
amend, or dispense with any pro-		
vision of act.....	7	62
may make and enforce supplementary		
provisions to act.....	7	62
NAME		
of agent may be registered.....	149	277
of lessee of whole house to be registered.....	148	276
of owner to be registered.....	148	276
NAMES		
indexing, and addresses.....	152	279
NATIONAL BOARD OF FIRE UNDER-		
WRITERS.....	2 (17)	52
NATIONAL FIRE PROTECTION ASSOCIA-		
TION.....	2 (17)	52
NATIONAL HOUSING ASSOCIATION PUB-		
LICATIONS.....	62	197
NEW COURTS IN EXISTING DWELLINGS.....	73	201
NEW DWELLINGS		
occupation of, without certificate of		
compliance unlawful.....	141, 142	266, 268
occupied without certificate of com-		
pliance to be vacated.....	142	268
permit necessary.....	140	263
provisions relating to.....	20-62	71-196

INDEX

	SECTION	PAGE
NEW ENGLAND		
"three-deckers" in.....	62	196, 197
NEW YORK		
definition of tenement house in.....		13
NIGHT-LIGHTING		
of halls and stairs.....	91	210
of water-closet compartments.....	47, 78	166, 205
NOTES		
explanation of, in model housing law.....		22
NOTICES		
service of.....	150	278
NUISANCE.....	2 (19)	53
abatement of, procedure for.....	112, 113, 144	234, 236, 271
definition.....	2 (19)	53
from water to adjacent buildings.....	97	216
smoke, in cities.....	20	71
OCCUPANCY		
change in.....	4	60
change in, of dwellings erected subsequent to act, in violation thereof, forbidden.....	4	60
mixed, definition.....	2 (5)	37
municipal authorities may enact supplementary ordinances relative to.....	7	62
partial, permits for.....	141	267
OCCUPANT		
responsible for compliance with provisions relating to lodgers.....	111	230
to keep dwellings clean.....	101	220
to provide receptacles for garbage, ashes, rubbish and refuse.....	105	223
OCCUPANTS		
duties, as to cleanliness of dwellings.....	101	220
scuttles, bulkheads, ladders and stairs to be easily accessible to.....	115, 129	239, 260
OCCUPATION		
of basement rooms for living purposes.....	43, 94	161, 213
of cellar rooms for living purposes prohibited.....	42, 94	161, 213
of interior rooms.....	120	240
of new or converted dwelling without certificate of compliance unlawful.....	141, 142	266, 268
percentage of lot allowed for.....	20, 70	71, 200, 295
unlawful, procedure to prevent.....	144	271
OCCUPIED		
construction of word.....	2 (20)	53
OCCUPIED SPACES.....	2 (16)	50
definition.....	2 (16)	50
OPEN PLUMBING		
required.....	49, 78	173, 205

INDEX

	SECTION	PAGE
OPEN SPACE		
between buildings on same lot.....	29	125
table showing, requirements.....		295
"OPEN" STAIRS.....	56	191
OPERATIONS		
building, effect of act on.....		293
ORDERS		
service of.....	150	278
ORDINANCES		
construction of word.....	2 (20)	53
inconsistent with act repealed.....	158	285
local, conflict with.....	7	63, 65
not to modify minimum requirements of act.....	7	62
OUTDOOR WATER-CLOSETS		
prohibited.....	47, 78, 124	166, 205, 246
OUTER COURT		
See <i>Court</i>		
OUTSIDE PORCHES.....	41	158
See <i>Porches, Outside</i>		
OUTSIDE STAIRS		
in lieu of fire-escapes.....	52, 80	184, 206
second means of egress.....	51, 127	179, 258
OUTSKIRTS OF CITIES		
application of law to.....	1	29
OVERCROWDING.....	110	229
and contact diseases.....	111	231
OWNER		
may file agent's name for service of process.....	149	277
registry of name of.....	148	276
responsible for compliance with pro- visions relating to lodgers.....	111	230
to file plans for new buildings or al- terations.....	140	263
to keep dwellings clean.....	101	220
to paint or whitewash walls of courts.....	102	221
to pay costs in removal of nuisance.....	143	269
to provide receptacles for garbage, ashes, rubbish and refuse.....	105	223
OWNERSHIP		
statement of, names of interested parties and residences to be filed with plans.....	140	263
PAINING		
of cellar walls and ceilings.....	95	215
of fire-escapes.....	52, 80, 114	184, 206, 239
of surfaces beneath and around water- closets and sinks.....	96, 122, 123	215, 245, 246
of walls and ceilings.....	103	222
of walls of courts.....	102	221

INDEX

	SECTION	PAGE
PAINT STORES		
doors, windows or transoms to halls		
of dwellings from, forbidden.....	108	227
PAN CLOSETS		
prohibited.....	49, 78, 124	173, 205, 246
PAPER		
See <i>Wall Paper</i>		
PAPER STOCK		
storage of, forbidden.....	107	226
PARK		
definition.....	2 (21)	57
PART STORY		
definition.....	2 (13)	46
PARTITIONS		
for water-closet compartments.....	47, 78, 124	166, 205, 246
PASSAGES		
to be kept clean.....	101	220
PASSAGEWAYS		
for inner courts.....	24, 27, 73	109, 121, 201
PENALTIES FOR VIOLATIONS.....	143	269
PENALTY		
judgment to establish, as lien.....	146	275
PENDING SUIT		
notice of.....	147	275
PERCENTAGE OF LOT OCCUPIED.....	20, 70	71, 200, 295, 296
PERJURY		
false swearing deemed.....	140	263
PERMIT		
cancellation of, for alterations and		
construction.....	140	263
expiration by limitation of, for altera-		
tions and construction.....	140	263
for lodgers, roomers and boarders.....	111	230
for occupation of basement rooms.....	94	213
for partial occupancy.....	141	267
for storage of combustible materials.....	107	226
to commence new buildings or make		
alterations.....	140	263
"PHILADELPHIA ROW" HOUSE.....	24	109
PIPES		
space around plumbing, to be air-		
tight.....	49, 78	173, 205
PIVOTED SASH.....	2 (12)	46
PLANNING SUNLIGHT CITIES.....	21	80
PLANS		
alterations and construction must be		
in accordance with approved.....	140	263

INDEX

	SECTION	PAGE
PLANS (Continued)		
alterations before approval of plans		
forbidden.....	140	263
certificate of approval of, to be issued.....	140	263
changes in, to be approved by health		
department.....	140	263
may be amended.....	140	263
not to be removed from health de-		
partment.....	140	263
plat of lot to be filed with.....	140	263
showing practicability of act.....		293-334
to be examined.....	140	263
to be filed by owner, agent or architect.....	140	263
to be public records.....	140	263
to conform to acts and ordinances.....	140	263
PLASTERING		
of cellar ceiling.....	125	257
PLUMBING.....49		
fixtures, enclosure of, prohibited.....	49, 78	173, 205
fixtures to be trapped.....	49, 78, 124	173, 205, 246
open, required.....	49, 78	173, 205
pipes, space around, to be made air-		
tight.....	49, 78	173, 205
pipes to be exposed.....	49, 78	173, 205
sanitary, required.....	49, 78, 124	173, 205, 246
system to be connected with public		
sewer and city water supply before		
occupation.....	48	172
to be in accordance with plumbing		
regulations.....	49, 78, 124	173, 205, 246
PLUNGER CLOSETS		
prohibited.....	49, 78, 124	173, 205, 246
POLICE POWER		
welfare clause of.....	24	111
PORCHES		
outside, definition.....	41	158
outside, diminishing light and ventila-		
tion, prohibited.....	41	158, 159
POSTING		
of notices, orders or summons, and		
mailing copy thereof, lawful service... ..	150, 151	278
POWERS CONFERRED.....154		
PRACTICABILITY		
of model housing law.....		293
PREMISES		
construction of word.....	2 (20)	53
PRIVACY.....36		
PRIVATE DWELLING.		
definition.....	2 (2)	32

INDEX

	SECTION	PAGE
PRIVIES		
to be kept clean	101	220
PRIVY VAULTS		
prohibited	48, 124	172, 246, 247
substitution of water-closets for	124	246
temporary use of	9	65, 66
PRIVY VAULTS, SCHOOL SINKS AND		
WATER-CLOSETS	124	246
PROCEDURE	144	271
PROCEEDINGS		
costs of	143, 144	269, 271
for removal of nuisances	112, 113, 144	234, 236, 271
for vacation of infected and uninhabit- able houses	112, 113	234, 236
to prevent conduct of unlawful busi- nesses	144	271
PROCESS		
filing of agent's name for service of	149	277
PROHIBITED USES	106	225
PROPERTY DIVISIONS		
changes in, necessary for ideal light- ing and ventilation of dwellings		337, 338
PROVISIONS		
applicable to alteration of dwellings	70-86	200-208
applicable to new dwellings	20-62	71-196
enforcement of, of act	153	279
fire protection	50-62	178-196
for multiple-dwellings of Classes A and B	2 (3)	36
general	1-12	27-68
improvement	120-129	240-260
legal	140-159	263-286
light and ventilation	20-41	71-158
maintenance	90-115	210-239
not to be modified	7	62
of act, to govern in all cases	158	285
of other acts repealed	158	285
sanitary	42, 49	161-173
windows	2 (12)	46
PUBLIC HALL	2 (10)	45
definition	2 (10)	45
PUBLIC HALLS	38	152
lighting	90, 91	210
See also <i>Halls, Public</i>		
PUBLIC HALLS AND STAIRS		
lighting and ventilation of	38, 39, 121	152-156, 244
PUBLIC RECORDS		
indexes of names and addresses to be	152	279
plans and specifications to be	140	263
PUMPS		
and tanks to be provided	98	217

INDEX

	SECTION	PAGE
PUNISHMENT		
for violation of act.	143	269
PURPOSE		
of model housing law.		19, 20
RAGS		
storage and handling of, forbidden.	106, 107	225, 226
RAILROAD RIGHT OF WAY.	2 (21)	57
RAIN LEADERS.	97	216
RAVINE		
definition.	2 (21)	57
REAR		
buildings and front, space between.	29	125, 127
REAR OF LOT		
definition.	2 (9)	43
REAR YARDS		
table showing depths required.	23	91, 295
See also <i>Yards</i>		
RECEPTACLES FOR ASHES, GARBAGE AND RUBBISH.	105	223
RECESSED HALL		
deemed separate hall.	38	152
RECORDS		
public, plans to be.	140	263
public, indexes of names and addresses to be.	152	279
to be kept by enforcing official.	153	280
REFORM, HOUSING		
See <i>Housing Reform</i>		
REFUSE		
receptacles for.	105	223
REGISTRY		
of names and addresses of agent, owner and lessee, number of apartments, number of rooms in each apartment and number of families.	148, 149	276, 277
REGULATIONS		
construction of word.	2 (20)	53
for lodgers, roomers and boarders.	111	230-234
local, not to modify minimum requirements of act.	7	62
plumbing.	49, 78, 124	173, 205, 246
REMEDIES.	140-159	263-286
REMOVAL OF DWELLING		
places it under provisions of act relating to new dwellings.	5	61
RENT		
not recoverable when new or converted dwellings are occupied unlawfully.	142	268

INDEX

	SECTION	PAGE
REPAIR		
fire-escapes to be kept in good.....	114	239
REPAIRS.....	97	216
to buildings, etc.....	113	236
when, may be made by health officer.....	113	236
REPEAL.....	158	285
of minimum requirements of law for- bidden.....	7	62
REPORT OF HEIGHT OF BUILDINGS COMMISSION.....	21	78, 79
REQUIREMENTS		
and remedies.....	140-159	263-286
provisions of act, minimum.....	7	62
RESIDENCE DISTRICTS.....		376
exceptions permitted in.....	29	125
hotels in.....	24	109
how abolished.....		376
how established.....		376
restrictions governing.....		376
RESPONSIBILITY		
tenant's.....	145	274
RESULTS		
in housing reform, test of methods.....		7
RIGHT OF ENTRY.....	156	283
RIGHT OF WAY		
railroad.....	2 (21)	57
RISERS, STAIR		
See <i>Stairs, Construction of</i>		
RIVER		
definition.....	2 (21)	57
ROOF BULKHEADS		
See <i>Bulkheads</i>		
ROOF EGRESS		
See <i>Egress, Roof</i>		
ROOF EGRESS; SCUTTLES AND BULK- HEADS.....	53	187
ROOF EGRESS; SCUTTLES, BULKHEADS, LADDERS AND STAIRS.....	129	260
ROOF STAIRS.....	81	207
ROOFS		
to be kept clean.....	101	220
to be kept in good repair and not to leak.....	97	216
ROOMERS		
embracing lodgers and boarders.....	3	57
regulation of.....	111	230-234
taking of, effect on classification of dwelling.....	3	57

INDEX

	SECTION	PAGE
ROOM OVERCROWDING		
and contact diseases.....	111	231
ROOMS		
additional, to be constructed in accordance with provisions of Article II.....	74	202
air space required in.....	110	229
alcove, lighting and ventilation of.....	35, 75, 76	141, 202, 204
basement. See <i>Basement</i>		
cellar. See <i>Cellar</i>		
height of.....	34, 74	139, 202
interior, lighting and ventilation of.....	120	240
interior, location of windows in.....	120	240
interior, occupation of.....	120	240
interior, skylights for.....	120	240
lighting and ventilation of.....	31, 32, 35, 75, 76, 120	132, 135, 141, 202, 204, 240
minimum height of.....	34, 74	139, 202
minimum width of.....	33, 74	136, 202
not to be overcrowded.....	110	229
number of, in each apartment to be registered in health department.....	148	276
size of.....	33, 74	136, 202
subdivision of existing.....	76	204
to be kept clean.....	101	220
walls and ceilings of inner, to be kalsomined or painted white to improve lighting, if required by health officer.....	103	222
windows in, location of.....	31, 76	132, 204
windows in, size of.....	32, 76	135, 204
ROOMS AND HALLS		
lighting and ventilation of.....	75	202
ROW DWELLINGS		
not prohibited.....	24	96
RUBBISH		
accumulation of, forbidden.....	101	220
receptacles for.....	105	223
RULING		
of local authorities not to modify minimum requirements of act.....	7	62
SANITARY PLUMBING REQUIRED.....	49, 78, 124	173, 205, 246
SANITATION.....	42-49	161-173
municipal authorities may enact supplementary ordinances relative to.....	7	62
SASH		
casement.....	2 (12)	46
hinged.....	2 (12)	46
pivoted.....	2 (12)	46
storm.....	2 (12)	46
SASH DOOR		
equivalent of window.....	40	157

INDEX

	SECTION	PAGE
SAWYER PARK		
group houses.....	24	109
SCHOOL-SINKS		
substitution of water-closets for.....	124	246
SCOPE		
of Act.....	1, 12	27, 68
of building code.....		11, 12
of model housing law.....		14, 15, 16, 20
SCUTTLES		
roof, access to, shall be direct.....	53, 129	187, 260
fireproof.....	53, 82, 129	187, 207, 260
hinged, may be required by super- intendent of buildings.....	129	260
key-locks on, to be removed.....	129	260
location of, in rooms forbidden.....	129	260
locking of, forbidden.....	115, 129	239, 260
movable bolts or hooks allowed on.....	129	260
size of.....	53, 129	187, 260
stair leading to.....	53, 81, 115, 129	187, 207, 239, 260
to be easily accessible to all occu- pants.....	115, 129	239, 260
to be kept free from incumbrance.....	115, 129	239, 260
to be located in ceiling of public hall.....	53, 129	187, 260
SCUTTLES, BULKHEADS, LADDERS AND STAIRS.....	115	239
SEMI-DETACHED HOUSE.....	2	32
SEPTIC TANKS.....	9, 124	66, 247
SERVICE		
of notices, orders, and summons.....	143, 150, 151	269, 278
of process, filing of agent's name for.....	149	277
SET-BACKS		
uniformity of front line.....	21	77, 82
SEWAGE		
provisions for disposal of.....	9, 48, 100, 124	66, 172, 219, 246
SEWER		
catch-basins to be provided where there is no, system.....	100	219
connection.....	48	172
SEWER CONNECTIONS.....	9	65, 66
and water supply.....	9	65
practicability of, decided by health officer.....	9	65
to be made within certain time limit.....	124	246
where provisions of act relative to, apply.....	9	65
SHADOWS CAST BY TALL BUILDINGS.....	21	80, 81
SHAFTS		
access to bottom of.....	126	258
and courts.....	126	258

INDEX

	SECTION	PAGE
SHAFTS (Continued)		
construction of.....	58, 84	193, 207
doors at bottom of.....	126	258
elimination of, by shallow lots.....		337, 338
fireproof doors to.....	58, 84	193, 207
fireproof, for dumb-waiters and ele- vators.....	58, 84	193, 207
self-closing doors to.....	58, 84	193, 207
SHEEP		
keeping of, in dwelling or on premises of multiple-dwellings, prohibited.....	106	225
SHIPPING BOARD DEVELOPMENT.....	24	109
SHORT TITLE AND APPLICATION.....	1	27
SIDE YARDS.....	24	94
covering over on ground floor.....	24	110
Federal Government Standards.....	24	97, 101
requirements for hotels.....	24	108
table showing widths required.....	24	101, 295
See also <i>Yards</i>		
SINK		
in each apartment, suite or group of rooms.....	46	166
SINKS.....	122	245
school.....	124	246
school, substitution of water-closets for.....	124	246
surfaces beneath and around, to be kept in good order and painted.....	96, 122	215, 245
wooden, prohibited.....	49, 78	173, 205
woodwork under.....	96, 122	215, 245
SIZE		
of courts.....	25, 29, 73	113, 125, 201, 295
of roof bulkheads and scuttles.....	53, 129	187, 260
of rooms.....	33, 74	136, 202
of skylights.....	77	204
of water-closet compartments.....	47, 78	166, 205
of windows.....	94	213
See also <i>Windows</i>		
of yards.....	22, 24, 29, 72	82, 94, 125, 200, 295
SKYLIGHTS.....	77	204
health department may order cutting in of.....	121	244
in interior rooms.....	120	240
in public halls.....	39, 77, 121	156, 204, 244
ventilating, may be used in water- closet compartments on top floor of existing dwellings.....	37, 78	147, 205
SMOKE NUISANCE		
in cities.....	20	71
SOLUTION OF HOUSING PROBLEM		
See <i>Housing Problem; Housing Reform</i>		

INDEX

	SECTION	PAGE
SPACE		
around plumbing pipes to be air-tight.	49, 78	173, 205
between buildings.	24, 29	94, 125, 295
table showing open, requirement.		295
underneath sinks and water-closets to		
be kept open.	122, 123	245, 246
unoccupied, between buildings on		
same lot.	29	125
SPACE BETWEEN ADJACENT BUILDINGS		
See <i>Side Yards</i>		
SPACES		
occupied, definition.	2 (16)	50
SPECIFICATIONS		
approved, alterations and construction		
must be in accordance with.	140	263
may be amended.	140	263
not to be removed from health de-		
partment.	140	263
plat of lot, to be filed with plans and.	140	263
to be examined.	140	263
to be filed by owner, agent or architect.	140	263
to be public records.	140	263
to conform to acts and ordinances.	140	263
SQUARE.	2 (21)	57
SQUASH COURTS		
windows in rooms used for.	31	132
STABLE		
in dwelling, or on premises, prohibited.	30, 106	130, 225
on rear of lot permitted in certain cases.	29, 30	125, 126, 130
public, prohibited.	30	130
STAIR ENCLOSURES.	56	190
STAIR HALLS.	2 (11, 55	45, 189
See also <i>Halls, Stair</i>		
STAIRS		
additional inside or outside, second		
means of egress.	51, 127	179, 258
and public halls.	54	189
bulkheads to have, with guide or hand-		
rail.	129	260
cellar, inside, prohibited.	59	194
closet under, to upper stories forbidden.	60	196
construction of.	54, 55	189
elevators in well-hole of, prohibited.	58	193
elevators separated from, by fire-		
resistive walls.	58, 84	193, 207
from entrance floor to roof.	54	189
leading to roof bulkhead or scuttle. 53, 54, 81, 115,		187, 189 207, 239,
129		260
"open"	56	191
outside, in lieu of fire-escapes.	52, 80	184, 206
roof, not to be removed or replaced		
with ladder.	81	207

INDEX

	SECTION	PAGE
STAIRS (Continued)		
scuttle or bulkhead, to be easily accessible to all occupants.....	115, 129	239, 260
to be kept free from incumbrance.....	115, 129	239, 260
to be kept clean.....	101	220
winding, prohibited.....	54	189
wooden hand-rails to.....	55	189
STAIRWAYS.....	83	207
fire-escape.....	52, 53, 80, 81, 127, 129	184, 187, 206, 207, 258, 260
STANDARDS		
higher, to govern in conflicting laws.....	7, 158	63, 65, 285
STANDARDS OF FEDERAL GOVERNMENT		
as to side yards.....	24	97, 101
STATE BOARD OF HEALTH.....		
a request of governor shall examine into and report on enforcement of act.....	10	67
may examine into enforcement of act.....	10	67
STATES HAVING HOUSING LAWS.....		vi
STATUTES		
inconsistent with act repealed.....	158	285
STORAGE		
and handling of rags and junk forbidden.....	106	225
of articles dangerous to life or health forbidden.....	107	226
of combustible materials prohibited.....	107	226
of cotton, excelsior, feathers, feed, hay, paper stock, rags and straw forbidden.....	107	226
STORES		
paint, oil, drug and liquor, doors, windows or transoms to halls of dwellings from, prohibited.....	108	227
STORM SASH.....	2 (12)	46
STRAW		
storage of, forbidden.....	107	226
STREET		
construction of word.....	2 (21)	56
width of, to regulate height of dwelling.....	21, 71	75, 200
STUDIO APARTMENTS		
included in Class A multiple-dwellings.....	2 (3)	34
SUBDIVISION		
of existing rooms.....	76	204
SUIT PENDING		
notice of.....	147	275
SUMMER HOUSES.....	29	127

INDEX

	SECTION	PAGE
SUMMONS		
service of.....	151	278
SUNLIGHT		
and city planning.....	21	80
relation to orientation.....	21	81, 82
volume in rooms, in relation to height of windows.....	21	82
SUPERINTENDENT OF BUILDINGS		
See <i>Inspector of Buildings</i>		
SUPPLEMENTARY PROVISIONS		
municipal authorities empowered to enact and enforce certain ones.....	7	62
SUPREME COURT		
injunction against health department granted only by.....	157	284
SWAN, HERBERT S.....	21	80
SWEARING		
false, deemed perjury.....	140	263
SWIMMING POOLS		
windows in rooms containing.....	31	132
SWINE		
keeping of, in dwellings or on prem- ises of multiple-dwellings prohibited.....	106	225
TABLES SHOWING OPEN SPACE REQUIRE- MENTS.....	24	101, 295
TABLES SHOWING SIDE YARD AND REAR YARD....		295
TANKS		
and pumps to be provided.....	98	217
See also <i>Flush Tanks</i>		
TAXPAYER		
may bring action for enforcement of act.....	153	279
TENANT		
eviction of, for non-compliance with act.....	111, 145	230, 274
See also <i>Occupant</i>		
TENANT'S RESPONSIBILITY.....	145	274
TENEMENT HOUSE		
definition.....		13
TENEMENT HOUSE LAW		
difference between, and building code.....		11, 12, 13
difference between, and housing law.....		14, 15, 16
effort to secure, instead of housing law sometimes wise.....		23
scope of.....		12, 13, 14
TENEMENT HOUSE LAWS.....		11-16

INDEX

	SECTION	PAGE
TENEMENT HOUSE REFORM		
<i>See Housing Reform</i>		
TENEMENT HOUSES		
height of rooms in.....	34	141
included in Class A multiple-dwelling.....	2 (3)	34
wooden.....	62	196
"THREE-DECKERS"		
in Chicago and New England.....	62	196, 197, 198
menace of.....	62	196, 197
THROUGH VENTILATION.....	31	132, 134
TILE		
house drains, prohibited.....	49, 78	173, 205
TIME		
for compliance.....	11	67
when act takes effect.....	159	286
TITLE		
of model housing law.....		27
TOILET ROOM		
general, supplementary to required		
water-closets, not prohibited.....	47, 78, 92	166, 205, 211
TOWER		
fire, second means of egress.....	51, 127	179, 258
TOWN		
definition of.....	2 (20)	54
TRANSOMS		
for cross-ventilation.....	31	132, 134
in stair halls forbidden.....	56	190
to halls of dwellings from paint, oil,		
drug and liquor stores forbidden.....	108	227
TRAPPING		
of plumbing fixtures required.....	49, 78, 124	173, 205, 246
TRAYS.....	47, 78	166, 205
<i>See Drip Trays</i>		
TREADS, STAIR		
<i>See Stairs, Construction of</i>		
TROPICAL COUNTRIES		
increased ceiling height necessary in.....	34	139
TUTTLE, GEORGE W.....	21	80
TWO-FAMILY DWELLING		
construction of words.....	2 (20)	53
definition.....	2 (2)	32
TYPES		
buildings included in housing problem.....		13, 14, 15, 16
UNDERTAKING		
not necessary* for health department		
to give.....	157	284

INDEX

	SECTION	PAGE
UNINHABITABLE HOUSES		
proceedings for vacation of.....	112	234
UNITED STATES		
basis for housing laws in.....		19
UNITED STATES BUREAU OF STANDARDS.....	2 (20)	54, 56
UNLAWFUL BUSINESSES		
procedure to prevent conduct of.....	144	271
UNLAWFUL OCCUPATION.....	142	268
USE		
municipal authorities may enact supplementary ordinances relative to.....	7	62
USED		
construction of word.....	2 (20)	53
USES		
prohibited.....	106	225
VACATION		
health department may extend time for.....	112	234
of dwellings erected, altered or occupied contrary to law.....	4	60
of dwellings unfit for human habitation.....	112	234
of new and converted dwellings occupied without certificate of compliance.....	142	268
of premises, procedure for.....	112, 113, 144	234, 236, 271
VALIDITY OF LAW.....	159	286
VARIATIONS		
explanation of, in model housing law.....		23
local, in housing laws.....		19, 20
VAULTS		
privy, prohibited.....	48, 124	172, 246
substitution of water-closets for.....	124	246
temporary use of.....	9	65, 66
VEILLER, LAWRENCE		
A Model Tenement House Law.....		19
Housing Reform.....		55, 62
VENTILATING SKYLIGHTS.....	77	204
in public halls.....	39, 77, 121	156, 204, 244
VENTILATION		
and light.....	20-41	71-158
artificial, inadequacy of.....	37	148, 149, 150
cross.....	31	132, 134
ideal, of dwellings.....		337, 338
municipal authorities may enact supplementary ordinances relative to.....	7	62
of alcoves and alcove rooms.....	35, 75, 76	141, 202, 204
of basement.....	43, 44, 94	164, 166, 213
of bath rooms.....	37, 76	147, 204
of cellars.....	44, 125	162, 257

INDEX

	SECTION	PAGE
VENTILATION (Continued)		
of interior rooms.....	120	240
of public halls.....	38, 75, 121	152, 202, 244
of rooms.....	31, 32, 35, 75, 76, 120	132, 135, 141, 202, 204, 240
of stair halls.....	40, 75, 121	157, 202, 244
of water-closet compartments, sky-lights permitted.....	37, 78	147, 205
outside porches diminishing, prohibited.....	41	158
space under entrance floor.....	44	162
through.....	31	132, 134
VILLAGE		
definition of.....	2 (20)	54
VIOLATIONS		
penalties for.....	143	269
procedure for prevention of, of act.....	144	271
WALL-BEDS.....	41 A	160
WALL PAPER.....	104	222
WALLS		
and ceilings of rooms.....	103	222
around water-closets and sinks to be kept in good order and painted.....	96, 122, 123	215, 245, 246
foundation, damp-proofing and water-proofing of.....	44	162
no paper to be placed on, until old paper is removed.....	104	222
of cellar, to be painted or whitewashed.....	95	215
of courts, to be painted or whitewashed.....	102	221
of rooms, to be kalsomined or painted white.....	103	222
roofs to be drained so as not to cause dampness in.....	97	216
to be cleaned before papering.....	104	222
to be kept clean.....	101	220
WASH-BOWL		
in each apartment, suite or group of rooms.....	46	166
WASH-TRAYS		
wooden, prohibited.....	49, 78	173, 205
WATER		
See <i>City Water</i>		
WATER-CLOSET		
accommodations.....	47, 78, 93	166, 205, 212
compartments, access to.....	36	145
base and floors to be water-proof.....	47, 78, 124	166, 205, 246
in general toilet room.....	37, 76, 78	147, 204, 205
lighting and ventilation of.....	37, 47, 76, 78, 124	147, 166, 204, 205, 246
new, on top floor of existing dwellings.....	78	205
partitions for.....	47, 78, 124	166, 205, 246
size of.....	47, 78	166, 205
ventilation.....	37	147

INDEX

	SECTION	PAGE
WATER-CLOSET (Continued)		
defective or antiquated, fixtures replaced	78	205
general, accommodations in cellar prohibited . .	92	211
WATER-CLOSETS		
and sinks	123	246
flush tanks to be provided for new	96	215
for basement rooms	124	246
general toilet room, supplemental to	94	213
required, not prohibited	47, 78, 92	166, 205, 211
in cellar, prohibited without written		
permit	47, 78, 92	166, 205, 211
location of	47, 78	166, 205
number of, in multiple-dwellings	47, 78, 93, 124	166, 205, 212, 246
outdoor, prohibited	47, 78, 124	166, 205, 246
pan, plunger and long-hopper, pro-		
hibited	49, 78, 124	173, 205, 246
substitution of, for privy vaults, school		
sinks, cesspools or other receptacles	124	246
surfaces beneath and around, to be		
kept in good order and painted	96, 123	215, 246
to be kept clean	101	220
to be open	47, 78	166, 205
woodwork enclosing, forbidden	47, 78	166, 205
woodwork under	96, 123	215, 246
WATER CONNECTIONS		
practicability of, decided by health officer . . .	9	65
WATER SUPPLY		
city, required for multiple-dwellings	46, 98, 99	166, 217, 219
distribution of	48	172
in each apartment, suite or group of rooms . .	98, 99	217, 219
to be directly accessible to each family	46	166
where provisions of act relative to, apply . . .	98	217
	9	65
WATER-PROOF BASE		
and floor required for water-closet		
compartment	47, 78, 124	166, 205, 246
WATER-PROOFING		
of foundation walls	44, 125	162, 257
of lowest floor	44, 125	162, 257
WELFARE CLAUSE OF THE POLICE POWER		
	24	111
WELLS		
and cisterns	99	219
no opening in, for drawing water with		
pails or buckets	99	219
size, number, construction and main-		
tenance of, to be determined by		
health officer	99	219
to be provided with attachment for		
drawing water	99	219
WHAT KINDS OF HOUSES CAN BE BUILT		
UNDER THE MODEL LAW		293-334

INDEX

	SECTION	PAGE
WHEN TO TAKE EFFECT.....	159	286
WHITEWASHING		
of cellar walls and ceilings.....	95	215
of walls of courts.....	102	221
WIDTH OF COURTS		
proportionate to height.....	25	113
WILLIAMSPORT DEVELOPMENT.....	24	109
WINDING STAIRS		
prohibited.....	54	189
WINDOW		
sash door equivalent of.....	40	157
WINDOWS		
casement sash.....	2 (12)	46
health department may order cutting		
in of.....	121	244
in basement rooms, size of.....	94	213
in bath rooms.....	37, 76	147, 204
in interior rooms, location of.....	120	240
in interior rooms, size of.....	120	240
in public halls.....	121	244
in public halls, location of.....	38	152
in public halls, size of.....	39, 75	156, 202
in rooms.....	32	135
in rooms, location of.....	21, 31, 76	82, 132, 204
in rooms, size of.....	32, 76, 120	135, 204, 240
in stair halls, size of.....	40	157
in water-closet compartments.....	37, 47, 76, 78, 124	147, 166, 204, 205, 246
in water-closet compartments, size of.....	37, 76, 78	147, 204, 205
location of, in rooms used for art gal-		
leries, gymnasiums, squash courts,		
swimming pools.....	31	132
provisions for.....	2 (12)	46
supplementary, on side yards.....	24	109
to be kept clean.....	101	220
to halls of dwellings, from paint, oil,		
drug and liquor stores forbidden.....	108	227
two desirable for each room.....	31	132
WINDOWS AND SKYLIGHTS FOR PUBLIC		
HALLS.....	39	156
WINDOWS FOR STAIR HALLS		
size of.....	40	157
WOODEN		
boarding houses.....	85	208
building.....	2 (18)	52
buildings, definition.....	2 (18)	52
buildings, alteration or conversion of,		
to multiple-dwellings prohibited.....	62	196
not to be placed on same lot with		
multiple-dwellings within fire		
limits.....	86	208

INDEX

	SECTION	PAGE
WOODEN (Continued)		
on same lot with multiple-dwellings not to be enlarged.....	86	208
enlargements of existing, multiple-dwellings, except for water-closets or bath rooms, prohibited.....	85	207
erection of, multiple-dwellings, prohibited.....	62	196
hand-rails to stairs.....	55	189
multiple-dwellings forbidden.....	85	207
sinks and wash-trays prohibited.....	49, 78	173, 205
sleepers and floors in stair halls prohibited.....	55	189
tenement houses.....	62	196, 197, 198
WOODEN BUILDINGS ON SAME LOT WITH		
A MULTIPLE-DWELLING.....	86	208
WOODWORK		
enclosing plumbing in, forbidden.....	49, 78	173, 205
enclosing sinks and water-closets to be removed.....	122, 123	245, 246
enclosing water-closets in, forbidden.....	47, 78	166, 205
WORKINGMAN'S DWELLING		
reducing cost of.....	34	139
YARD		
front, definition.....	2 (6)	37
rear, definition.....	2 (6)	37
side, definition.....	2 (6)	37
water-closets prohibited.....	124	246
YARDS.....		
access to.....	2 (6), 22	37, 82
definition.....	22, 57	82, 193
front, not required.....	2 (6)	37
garage and rear yard requirements.....	22	84
minimum size of, not to be decreased by any building.....	23	92
proportionate size of.....	29, 72	125, 200
rear, size of.....	22	295
relation of rear to height of building.....	22	82
relation to alleys.....	25	115, 116
side, not required for new dwellings.....	22	87
side, size of.....	24	94
size of.....	24, 72	94, 110, 200, 295
table showing depths required to rear.....	22, 24, 29, 72	82, 94, 125, 200
to be concreted if required.....	23	91
to be graded and drained.....	45	164
to be kept clean.....	45	164
to be kept clean.....	101	220
YORKSHIP VILLAGE		
group houses.....	24	109
ZONING LAWS		
conflict with.....	7, 158	63, 286
control of store buildings by.....	29	127
height limitation.....	21	77, 78
relation of hotels to.....	21	76

NATIONAL HOUSING ASSOCIATION PUBLICATIONS*

MISCELLANEOUS PAMPHLETS

- What Bad Housing Means to the Community**—6TH EDITION. By ALBION FELLOWS BACON. No. 6
- One Million People in Small Houses**—3D EDITION. By HELEN L. PARRISH. No. 7
- Housing and Health**—4TH EDITION. By LAWRENCE VEILLER. No. 9
- Low Priced Housing for Wage Earners.** By J. G. SCHIDLAPP. No. 34
- Industrial Housing.** By JOHN NOLEN. No. 35
- Industrial Housing.** By LAWRENCE VEILLER. No. 36
- What Types of Houses to Build.** By PERRY R. MACNEILLE. No. 37
- The Districting of Cities.** By LAWSON PURDY. No. 38
- The Menace of the Three Decker.** By PRESCOTT F. HALL. No. 39
- Indian Hill—An Industrial Village for the Norton Co.** By CHARLES C. MAY. No. 40
- The After-Care of a Housing Law.** By ALBION FELLOWS BACON. No. 43
- Organizing the Housing Work of a Community.** By BERNARD J. NEWMAN. No. 44
- "Industrial Housing Developments in America."** Eclipse Park, Beloit, Wis. By LAWRENCE VEILLER. No. 46, Sawyer Park, Williamsport, Pa. By LAWRENCE VEILLER. No. 47
- The Industrial Village.** By JOHN NOLEN. No. 50
- The Challenge of the Housing Problem.** By NOBLE FOSTER HOGGSON. No. 51
- Triumphing Over the Gridiron Plan.** By LAWRENCE VEILLER. No. 52
- Good Housing as a Reducer of Labor Turnover.** By BOYD FISHER. No. 53
- The Cost and Value of Good Housing to our Industrial Life.** By LESLIE H. ALLEN. No. 54

Single copies of the above pamphlets may be obtained from the National Housing Association, 105 E. 22d St., New York City, for 25 cents each.

"Housing Betterment"

A Quarterly Journal of Housing Advance containing news notes and articles of general information concerning the housing movement in all its aspects. 90 pages. Circulation limited strictly to members.

"Housing Problems in America"

Proceedings of the various National Conferences on Housing in America. Cloth bound books of uniform size published under this title, running from 400 to 350 pages.

MEMBERS OF THE ASSOCIATION

Receive Free all miscellaneous publications as issued, the current volume of "Housing Problems in America" and "Housing Betterment."

ANNUAL MEMBERSHIP \$5.00

* This list does not include those publications which are out of print.

RUSSELL SAGE FOUNDATION PUBLICATIONS

THE PITTSBURGH SURVEY

Findings in 6 volumes, \$10.00 net. (Only 50 sets now available)

- Vol. I. Women and the Trades.** By ELIZABETH B. BUTLER. **\$1.50 net**
 "The book is easily the most complete and scholarly study of American women in industry that has yet been undertaken."—*Nation*.
- Vol. II. Work-Accidents and the Law.** By CRYSTAL EASTMAN. **\$1.50 net**
- Vol. III. Homestead: The Households of a Mill Town.** By MARGARET F. BYINGTON. **\$1.50 net**
 "Thorough, unbiased, and of great interest."—A. L. A. *Booklist*.
- Vol. IV. The Steel Workers.** By JOHN A. FITCH. **\$1.50 net**
 "This volume is not a dry statistical record, but an intensely vivid presentation of living facts."—*American Review of Reviews*.
- Vol. V. Wage-Earning Pittsburgh.** By PAUL U. KELLOGG and others. **\$2.50 net**
 "The volume is valuable not only as a part of the most monumental of American surveys, but also for the great amount of accurately determined information in the special studies."—*American Journal of Sociology*.
- Vol. VI. The Pittsburgh District.** Civic Frontage. By EDWARD T. DEVINE and others. **\$2.50 net**

THE SPRINGFIELD SURVEY

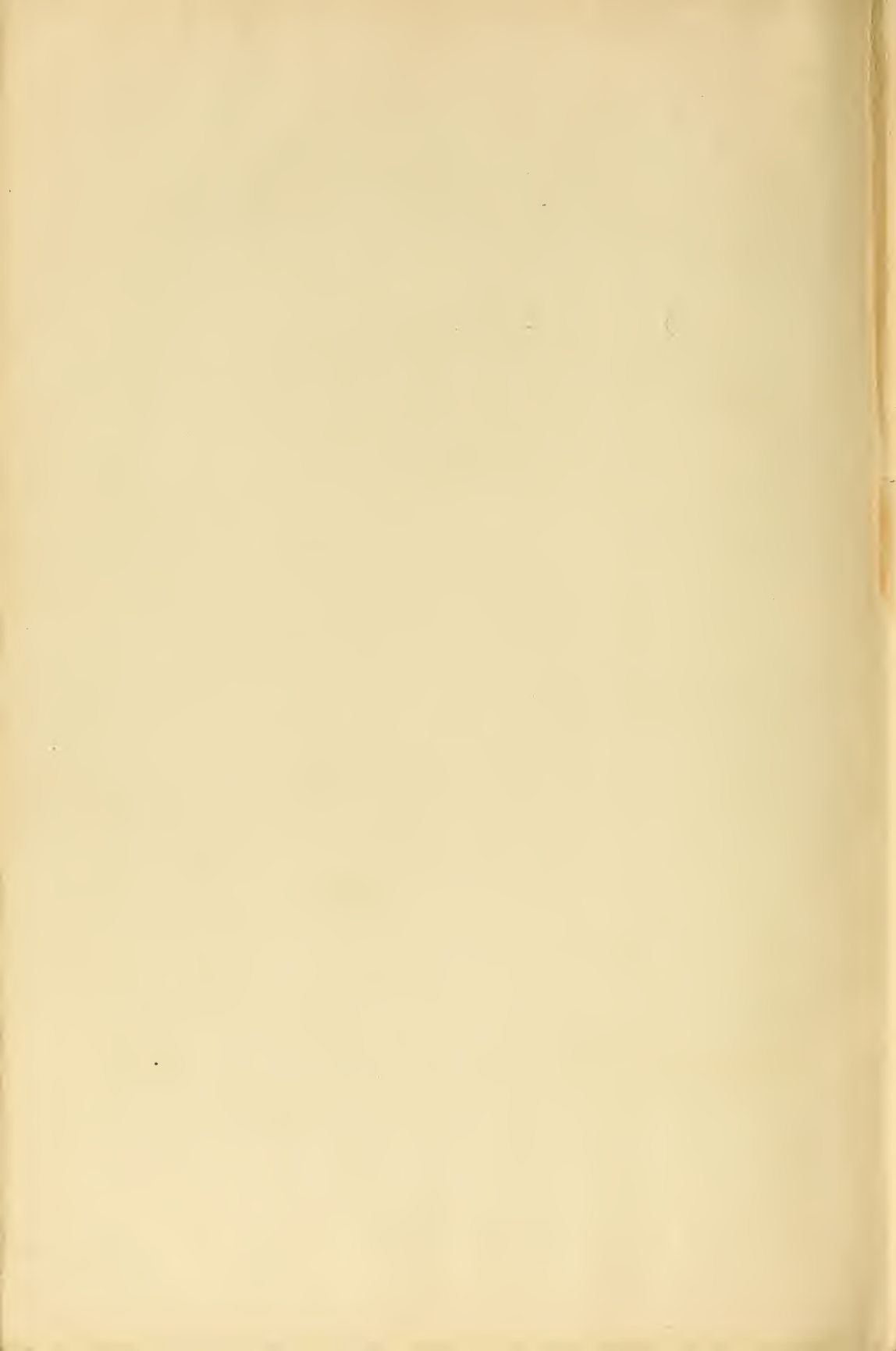
Findings in 3 volumes, \$5.00 net

- Vol. I. The Public Schools of Springfield, Illinois.** By LEONARD P. AYRES. **Care of Mental Defectives, the Insane, and Alcoholics in Springfield, Illinois.** By WALTER M. TREADWAY. **Recreation in Springfield, Illinois.** By LEE F. HANMER and CLARENCE A. PERRY. **Housing in Springfield, Illinois.** By JOHN IHLDER. **The Charities of Springfield, Illinois.** By FRANCIS H. MCLEAN.
- Vol. II. Industrial Conditions in Springfield, Illinois.** By LOUISE C. ODENCRANTZ and ZENAS L. POTTER. **City and County Administration in Springfield, Illinois.** By D. O. DECKER and SHELBY M. HARRISON. **Public Health in Springfield, Illinois.** By FRANZ SCHNEIDER, JR. **The Correctional System of Springfield, Illinois.** By ZENAS L. POTTER.
- Vol. III. A summary of the significant facts and recommendations for the 9 fields covered in the survey, together with a description of the methods followed.**

"This Springfield group of social and economic studies of actual conditions, accompanied by remedial and correctional suggestions and recommendations, represents a summing up of affairs in an American city that is of utmost interest and importance to other cities, especially to those with a population ranging from 40,000 to 150,000. In general, the questions met in Springfield are a good deal the same as those of other cities of similar size and situation, and conclusions reached concerning the problems of this city are applicable elsewhere."

Prof. Murray Gross, in the *National Municipal Review*.





LIBRARY OF CONGRESS



0 019 566 888 7

